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ABSTRACT

The 10 papers in this collection were presented at an open forum and meetings of three sections within the Division of Bibliographic Control: (1) "Review of the Work of the Section on Cataloguing 1989/1990" (Nancy R. John and Inger Cathrine Spangen); (2) "Report from the Section on Classification and Indexing" (Dorothy McGarry); (3) "Report of the Section on Bibliography" (Ross Bourne); (4) "Cataloging Simplification: Trends and Prospects" (Karen Horney); (5) "Brief Cataloguing in Card and Online Catalogues" (Anne M. Hasund Langballe); (6) "Current Problems with the MARC/ISBD (International Standard Bibliographic Description) Formats in Relation to Online Public Access of Bibliographic Information" (Oivind Berg); (7) "The Impact of CD-ROM on the End-User" (Derek G. Law); (8) "The Role of UDC (Universal Decimal Classification) in Finnish Classification Policy" (Arja-Riitta Haarala); (9) "IFLA Section on Classification and Indexing, 1977-1978" (E. R. Sukiasian); and (10) "CD-ROM: Its Use in Jamaica and Its Potential for Developing Countries" (June Vernon). (MAB)

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56th IFLA GENERAL CONFERENCE
STOCKHOLM, SWEDEN
18–24 AUGUST 1990

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BOOKLET 4

DIVISION OF BIBLIOGRAPHIC CONTROL

OPEN FORUM

Session 75 Sunday 19 August 14:00–15:30

Review of the Work of the Section on Cataloguing 1989/1990 (72-BIBCO-3-E)	Nancy R. John, University Library, University of Illinois at Chicago, USA and Inger Cathrine Spangen, Norwegian School of Library and Information Science, Oslo, Norway
Report from the Section on Classification and Indexing (71-BIBCO-2-E)	Dorothy McGarry, Physical Sciences and Technology Libraries, University of California, Los Angeles, USA
Report of the Section on Bibliography (70-BIBCO-1-E)	Ross Bourne, British Library, London, UK

SECTION OF CATALOGUING

Session 122 Tuesday 21 August 15:00–17:30

Cataloguing Simplification: Trends and Prospects (27-CAT-2-E)	Karen Horney, Northwestern University Library, Evanston, Illinois, USA
Brief Cataloguing in Card and Online Catalogues (17-CAT-1-E)	Anne M. Hasund Langballe, Biblioteksentralen, Oslo, Norway
Current Problems with the MARC/ISBD Formats in Relation to online public Access of bibliographic Information (52-CAT-3-E)	Øivind Berg, University Library of Oslo, Norway

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SECTION OF BIBLIOGRAPHY

Session 141 Wednesday 22 August 11:15–13:45

The Impact of CD-ROM on the End User (69-BIBL-1-E)	Derek G. Law, King's College, London, UK

SECTION OF CLASSIFICATION AND INDEXING

Session 113 Tuesday 21 August 12:00–14:30

The Role of UDC in Finnish Classification Policy (49-Class-1-E)	Arja-Riitta Haarala, Tampere University of Technology Library, Tampere, Finland

Review of the Work of the Section on Cataloguing 1989/1990

Nancy R. John
Assistant University Librarian, The University Library, The University of Illinois at Chicago, with the assistance of *Inger Cathrine Spangen*, Chief Educational Officer, Norwegian School of Library and Information Science, Oslo, Norway.

Abstract
This review provides a brief summary of the work accomplished in the past year and that in progress under the sponsorship of the IFLA Section on Cataloguing.

The Section on Cataloguing can celebrate its 55th birthday this year as the history of the Section dates back to 1935 when the IFLA Committee on Uniform Cataloguing Rules was established at the IFLA General Council in Madrid.

During these years the Section has taken on and carried through several important projects, and various useful and well known publications have come to light. Thanks to members of the Section we have got documents stating some basic principles and a basic philosophy of cataloguing, and we have got documents that have formed and form the basis of many national set of cataloguing rules.

This presentation will provide a brief account of the work accomplished in the past year. It will end up with a quick look into the future.

The work of the Section on Cataloguing has evolved from the longstanding program for Universal Bibliographic Control now called UBCIM (Universal Bibliographic Control and International MARC) and initiatives begun more than a decade ago to develop international standards and guidelines in support of that program. The International Standard Bibliographic Descriptions (ISBDs) and the *Guidelines for Authority and Reference Entries* have been major activities.

ISBD(PM)
The final draft of the revised ISBD for Printed Music – ISBD(PM) – was approved by the Standing committee on August 11, 1989. Publication delays resulted in the ISBD(PM) not being published before the move of the IFLA UBCIM Office from London to Frankfurt, and it is expected that ISBD(PM) will be the first publication issued under the new agreement reached between the UBCIM Programme and K.G. Saur. Publication date is not known but is expected in the early summer.

ISBD(A)
The harmonization of the ISBD for Antiquarian Books – ISBD(A) – has been carried through. The revised text has not been approved yet by the Standing Committee. Date of publication is not set, but one might hope for late fall or early winter 1990/1991.

ISBD(CF)
The new ISBD(CF) – *International Standard Bibliographic Description for Computer Files* – was published in March 1990 just prior to the move of the UBCIM Office. It is available from the UBCIM Office. Its ISBN is 0-903043-56-4.

ISBD(G)

The General ISBD – ISBD(G) – harmonization process is underway. The Working Group is reviewing the comments received in the international review.

Guidelines for Authority and Reference Entries (GARE)

The work on the portion of GARE that relates to names is complete. Other groups are considering uniform titles for laws and music, serial entries, and subjects. During the fall, the International Association of Music Libraries (IAML) proposed draft guidelines for authority entries for music uniform titles. The IAML proposal is being sent out by the UBCIM Office on behalf of the Standing Committee for a worldwide review during the period June 1–November 30, 1990.

New initiatives

As agreed upon at the last meeting of the Standing Committee the Section issued its first newsletter in the Spring of 1990. The Newsletter – SCATNews – was prepared by Inger Cathrine Spangen, Secretary to the Section, with assistance from the Section's Chair, Nancy R. John. The newsletter will be issued annually each spring.

The Secretary also prepared a text about the Section's activities as part of the membership brochure that the Division of Bibliographic Control has put together.

The Section was also involved in the planning of the Seminar on Bibliographic Records which preceded the IFLA Conference in Stockholm.

During the past year, two working groups were established and began their work. Both are meeting at the Stockholm conference. The first group, chaired by Nicole Simon of the Bibliothèque nationale, is considering the need to review Eva Verona's *Form and Structure of Corporate Names* in the light of the new technologies for international sharing of bibliographic and authority information. The second group, chaired by John Byrum of the Library of Congress, is considering the creation of guidelines for the creation of simplified ISBD-descriptions. The group is beginning by considering simplified descriptions created under the ISBD(M).

The Section's programme at the Stockholm Conference addresses this latter issue of simplified descriptions with three presentations of the prospects for abbreviated bibliographic records for national and international exchange of bibliographic data: (1) Karen Horny (Northwestern University, USA) "Cataloguing Simplification: Trends and Prospects", (2) Anne Ma Hasund Langballe (Norwegian Library Bureau) "Brief Cataloguing for Card and Online Catalogues", and (3) Öivind Berg (University Library of Oslo, Norway) "Abbreviated Bibliographic Records". The Section first addressed this issue at the 1988 conference in the presentations on Holland's PICA project and on the Australian national network. The same issue emerged at the Section's Paris programme which addressed the costs of cataloguing and the approach one national library is taking in response to increasing costs.

The Section is also involved in the Working Group on Authority Files on Subject Entries, set up by the Section on Classification and Indexing.

The UBCIM Office moved April first to Deutsche Bibliothek in Frankfurt am Main. Winston Roberts, UBCIM's able Programme Officer, moved up the ranks to become the Professional Coordinator at the IFLA Headquarters, and Marie-France Plassard agreed to defect from the UAP Programme to take on the challenges of managing the UBCIM operations under Kurt Nowak's direction. The Section wishes Winston well, welcomes the leadership of Marie-France and Kurt, and looks forward to continued strong cooperation between the Section and the Office. The Office successfully negotiated an agreement with K.G. Saur to undertake publication of all UBCIM publications except *International Cataloguing and*

Bibliographic Control which will continue to be published in Folkestone in the United Kingdom.

The Section will review its Medium Term Programme as part of the review that all IFLA units will begin in Stockholm. The result of this review will be the statement of goals for the next five years. Through the open discussions in its meetings and at the divisional forum, the Section identifies the key issues relevant to its program, and more generally, to the UBCIM Programme. The Section invites all librarians to assist us in identifying those areas to which it should direct its energies over the next few years in the hope of facilitating the "acclimatization" of the UBCIM Programme to a changing environment and ensuring its ongoing effectiveness.

Report from the Section on Classification and Indexing

Dorothy McGarry
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University of California, Los Angeles, USA

Abstract
The Section on Classification and Indexing had major changes in the Standing Committee this year, with the founding members leaving after the maximum eight years of service. The Section's Working Group on "Guidelines for Subject Authority Files" continued working on draft versions of the "Guidelines for Subject Authority and Reference Entries" to prepare the guidelines for worldwide review. One of the Section's founding members has written history of the Section covering 1977–1988, from its beginning as a Round Table. Programs at IFLA Conferences and an annual "Newsletter" help publicize the importance of subject access to information.

The Section on Classification and Indexing had major changes in the Standing Committee this year. All of the founding members of the Standing Committee had finished their maximum service of eight years and therefore left the Committee at the end of the Paris meeting last year. The Committee has 3 continuing members and 8 new members, from Canada, France, the Federal Republic of Germany, Norway, Portugal, the USSR, the United Kingdom, and the United States.

Membership in the Section is currently at 79, with representation from around the world. This is an increase of 16% over last year. I wish to thank the institutional and personal members for their support.

The major project of the Section this year was continuing work on the Guidelines for Subject Authority and Reference Entries. Barbara Kelm, from the Federal Republic of Germany, is Chair of the Working Group on "Guidelines for Subject Authority files", charged with preparing these guidelines. The Group has a geographically diverse membership representing the major international subject access systems. The North American members of the Working Group and of the Standing Committee met in conjunction with the Midwinter and Annual meetings of the American Library Association this year to discuss drafts of the sections. The European members of the Working Group met in Frankfurt for two days at the end of January this year. The Working Group as a whole is meeting for two sessions at this conference in Stockholm to discuss areas of the guidelines which need further consideration and to facilitate completion of a draft which can be sent out for world-wide review.

The Section is participating in a joint brochure prepared for the Division of Bibliographic Control as a whole. The brochure will provide information about current Section and Division activities for IFLA members. Each Section has prepared a segment, and information will be included on the UBCIM Programme.

E.R. Sukiasian, one of the founding members of the Section, wrote a paper on "IFLA Section on Classification and Indexing, 1977–1988." His paper was distributed to the members of the Standing Committee. Some of the history includes: the first open meeting of a Round Table on Classification in 1978; an early beginning, in 1980, for the tradition of having papers on classification and indexing in the host area; establishment of a Section in

1981. From 1978 to 1988, 28 reports were presented, with representatives from 13 countries. Many of the reports were published. Mr. Sukiasian's paper has much interesting information, and the Section would like to see it made more widely available.

The Chairperson of the Section received a query from the President of the Croatian Library Association asking what previous activities of the Section may have been in the area of a code for subject terms. Although there seems not to have been action on such a code by the Section, the Standing Committee has the topic on its agenda for this conference to discuss whether it should be pursued at this time.

Donna Duncan, Secretary of the Section, was appointed to fill an interim term on the UBCIM Programme Advisory Committee. The Section has been asked to appoint a member for the full term starting with the Moscow conference.

The Section has put together another excellent program for its open meeting. Tor Henriksen, Norwegian School of Library and Information Science, Oslo, Norway, continues the Section's tradition of treating subject access in the host area with his "Classification and Indexing in the Nordic Countries." Arja-Riita Haarala, Tampere University of Technology, Tampere, Finland, discusses "UDC in Finnish Information Policy." Ms. Haarala has been active in working with the FID Task Force for UDC System Development and is chair of a revision committee. She is therefore well qualified to report on some of the most recent activities related to the UDC.

Increased communication with the FID will result from the addition of A. Gilchrist as an observer for the FID on the Standing Committee, beginning at this conference.

The Section continues to publish an annual Newsletter for Section members, for members of the Standing Committee, and for others interested in classification and indexing. The Newsletter provides a means to share information about differing national experiences and to help foster an international perspective on classification and indexing.

70–BIBCO–1–E

Report of the Section on Bibliography

Ross Bourne
Assistant Director, Planning & Standards, National Bibliographic Service, The British Library, London, UK

Abstract
The paper examines the Section's terms of reference and considers how they conform with current bibliographic pre-occupations. It suggests that practitioners must continue to demonstrate the importance of bibliography to those who manage their institutions, lest it becomes marginalized by more apparently relevant areas of study, while at the same time preserving and passing on its traditional disciplines.

It is the function of IFLA to act as an international forum for librarians. I should like to think that such discussions will be forward-looking, challenge our prejudices and justify our attendance at desirable and interesting venues, and that we will return to our desks, vowing to put into practice all the things that we have heard. But how many of us can truthfully claim that this is what happens?

I want this morning to attempt to live up to those expectations. I propose to use the Section's terms of reference as a peg to present some thoughts on the nature of bibliography, and if I can provoke some discussion, or at least some unease, amongst you I shall feel that the time has not been entirely wasted.

This Section aims to encourage bibliographic activities in the fields of both theory and practice. But what is bibliography? And how, for that matter, can it be distinguished from the activities of our fellow Sections on Cataloguing and on Rare and Precious Books and Documents? Bibliography does indeed include the meticulous description of antiquarian items and incunabula, in which both those sections have an interest; but I would like to define it here as the art and practice of organising bibliographic data. whether in the form of catalogue records or citations, and accessible as conventional printed publications or computerised databases.

Bibliographies may be limited to particular subject areas or other logical divisions such as language or form of publication, or it may be general in scope; and its purpose, again, may be specialist or general. But the characteristic that brings together bibliographers, in the way that I have defined the bibliographic activity, is that of organisation. The art of bibliography is the art of bringing together information about books (and of course I do not exclude other forms of material) into a meaningful and helpful arrangement. So, while we leave matters of bibliographic description and the niceties of eighteenth century printing to our friends in other sections, we do take an interest in how their work is expressed to the end-user.

The end-user. I am sure I am not the only one here who dreads being asked by non-librarians what I do. How do you explain to the layman not only what your job is but also how relevant it is to modern circumstances? Because if we cannot convince others that the task of bibliography is relevant, then how can we convince ourselves? Perhaps we attempt to rationalise the amount of time we spend on what must seem to others as arcane and recherché processes; perhaps we bury ourselves in our work and hope that no-one will notice us. But modern circumstances being what they are, no-one should imagine that we can remain hidden for long. During the 1970s, libraries were becoming aware of the possibilities of automation;

but the characteristic mood of the 1980s was external pressure on, particularly, publicly funded bodies such as libraries not only to justify themselves but also to spend less money on their activities. We have, therefore, been forced to defend our profession, our craft; because if we cannot, our libraries may be undermined for lack of money and we may cease to have a profession or craft to practice.

So, I should say that a major priority of the Section on Bibliography is to reaffirm the importance of bibliography. How do we go about that? It seems an obvious thing to point out, but we must emphasise the sheer growth in the numbers of titles being published today. The Whitaker organisation in the United Kingdom has estimated that 100,000 British titles will be published in the last year of this century, an increase of about a third from 1989. One would expect other national publishing industries to be growing along similar lines. This argues that the task of bibliographers should start to be seen as more important if publication on that scale is not to result in the collapse of libraries. Then, we might argue that economic success depends – more than has been recognised – on being able to control and access information, in whatever form it is expressed. That is what librarianship is all about, but bibliography and bibliographic control are a major tool in information dissemination. We might also insist that bibliographers are trained to select and express bibliographic data in ways that are both cost-effective and useful. And we can emphasise the contribution that bibliography has made to the accessibility of information in the past.

I come now to some of the specific ways in which the Section on Bibliography might support, and has supported, the kinds of arguments I have been putting forwards. IFLA's Medium-Term Programme for 1986 to 1991 lists five specific objectives for the Section. The first of these is "improvement of national bibliographic control", and this is sub-divided into four separate aspects. The Section seeks to improve national bibliography in developing countries. Such countries were indeed represented at the 1977 conference in Paris and at the follow-up seminar in Brighton ten years later. But such evidence that there is suggests that while many of the lessons of 1977 and 1987 have been absorbed, national bibliography is not really any better regarded by those who are in a position to provide the resources. While in 1977 the bed-rock of the current national bibliography was the printed format, more recent developments in CD-ROM amongst those equipped to apply the new medium are creating a growing gap between developed and developing national bibliographic agencies. I believe the Section has a duty to close that gap: CD-ROM may indeed be the bibliographic medium of the future, but even in developed countries many libraries have still a considerable investment in older technologies.

The Section seeks to improve retrospective bibliographic control. On the positive side, member countries of the European Communities, with the support of the European association of research libraries, LIBER, have recognised the value to their heritage of the older material held in their great research libraries and have singled out retrospective conversion as one of the major action lines in the EC action plan for libraries. This Section needs to keep in touch with these initiatives and to ensure that future retrospective conversion projects take account of the best practices of those projects that have been completed.

I have mentioned already the economic importance of bibliography. The third sub-objective concerns the improvement of the use of national bibliographic control as national input to international information systems, and vice versa; bibliography is about heritage and culture, but it is also about the organisation of bibliographic information of whatever kind, scientific and economic as well as literary and artistic. Without ignoring the past, we must emphasise the value of bibliography to the present and to the future – if you like, we must promote ourselves, and not only to our fellow librarians.

The fourth sub-objective under the heading of national bibliographic control is the

improvement of interrelations between national bibliography and subject bibliographies (including bibliographic control of journal articles). There must be a recognition that bibliographic access is about more than looking for a known item: increasingly, as knowledge becomes more specialised, end-users need better information about a book's content. There are investigations taking place, in the United Kingdom and the United States, for example, into enhancing records with information not normally found in traditional bibliographic descriptions, that is the addition of abstracts and chapter titles, thereby increasing the opportunities for key-word access. The Section must interest itself in these initiatives, and at the same time promote the importance of subject access.

The Section's second objective is the "improvement of bibliographic control of publications of intergovernmental and international non-governmental organisations". To a large extent, this is already taking place, and one has to commend, say, Unesco's recent efforts in this field. Nevertheless, there is still much to be done, not least with publications emanating from Luxembourg and Brussels. I have already used the word "promote"; and promotion is what is necessary to persuade organisations such as the Commission of the European Communities that better bibliographic control is fundamental to the use of the information it produces. As a citizen and tax-payer of a member-state, I pick on the CEC, but I am sure there are examples of poor availability of bibliographic information outside Western Europe as well.

Users figure in the Section's third objective, "the study of the effectiveness of bibliographic services in relationship to users' needs". Rather more attention has been paid in recent years to the end-use of the information we provide; I would especially want to commend the work of the Centre for Bibliographic Management at the University of Bath, sponsored by the British Library's Research and Development Department. But while the Bath Centre has to a considerable extent been on the users' side and has drawn our attention to shortcomings in the content of our records and the way in which they are presented on microfiche and in online public access catalogues, I believe that many of us need still to be educated in the service part of our profession. Perhaps it is the consequence of removing ourselves from the public areas of our libraries the higher in the profession we rise, but I would like to see more of us taking an interest in what it is that our users actually want. Yes, we should continue to instruct our users in the interpretation of a bibliographic record, but we should also take account of what we hear them say, when, for example, they question the arrangement of bibliographies or are confused by the presence of arcane punctuation or symbols. And in a direct response to this objective, I should like the Section to institute an effectiveness study of some major bibliographic tools and to monitor not only their successes but their failures.

I hope I am not giving the impression that traditional bibliographic skills no longer have any value. I believe that they do, and I would endorse the sentiments of the Section's fourth objective, "the promotion of bibliographic knowledge". Whatever the future holds for bibliography, it is clear that it must build upon the past. The disciplines of Bestermann and the compilers of successive short title catalogues, such as Pollard, Redgrave and Wing, must continue to be worth studying; although they relied on sweat and old-fashioned technology, the dedication and experience they brought to their work are just as appropriate to the circumstances of the 1990s. Nevertheless, my evidence is that some schools of librarianship may need considerable persuasion that cataloguing and classification, let alone bibliography, are worthwhile topics to teach. Even after McLuhan it appears that the medium is more highly regarded by some than the message, and we have the spectacle of new recruits leaving their library schools knowing all about information technology and management techniques (despite the probability that they will not have the opportunity to practise those techniques for some years, by which time they will have changed) and not nearly enough about making

themselves useful in a library. We must stress to those who are responsible for educating the newcomers to our profession that bibliographic skills are at the heart of effective access to a library's collection, and I would like to see the Section put some effort into restoring the importance of those skills.

Finally, the Section aims to encourage "studies in the history of bibliographies and bibliographers in order to solve problems in the future development of bibliographic work". This ties in closely with the views I have just been expressing. And if we are to persuade the educators, and for that matter our employers, that bibliography is even more valuable than when our libraries were for the exclusive use of a scholarly élite, then we must provide them with the evidence.

I have tried in this short presentation not only to provide a personal interpretation of the Section's objectives, but also to suggest some areas where further work might be undertaken. It has probably become clear that I am not a traditionalist; however, I hope I have said enough to persuade you that I am committed to serving our users, that I believe that bibliography is one of the most important functions in a library and that the way to promote that view is not to be apologetic but to ensure that we can demonstrate it.

Cataloging Simplification: Trends and Prospects

Karen Horny
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Abstract
Interest in the most efficient possible use of staff, especially in the present days of economic pressures upon libraries, has brought increasing attention to possibilities for simplification in the expensive process of cataloging. Trends to establish standards for "minimal level cataloging" and to eliminate requirements for some elements or narrow designations of data in bibliographic records have become common. There is, however, a counter tendency to increase complexity in data content and designation in MARC records to permit fuller utilization of options for machine retrieval of information from bibliographic records.

This article discusses both the trends and some specific efforts toward simplification, especially the recent proposal for an "Alternative ISBD(M)" for contemporary materials. Implications of international exchange of records are identified and prospects for further simplification are discussed.

Both catalogers and administrators are aware of compelling needs for changes in cataloging standards to make bibliographic records easier to create. In this regard, widespread, although not unanimous opinion holds that there is too much time and effort expanded an description. Most librarians perceive access points as far more valuable results fo cataloging work and therefore look to savings in time spent in description as the most likely prospect for achieving more cataloging with limited staff. Influencing current discussions, economic pressures are now compelling libraries world-wide to examine possibilities for simplification in the expensive process of cataloging. Although libraries have good reasons based on concerns for services to their users for hesitating to reduce the amount and specificity of data in bibliographic records, it can be argued that less data about many items serves library users better than full data on fewer items but no catalog records for others. Computer technology has already allowed libraries to catalog more items more quickly while achieving significant savings in effort and expense by more efficient sharing of bibliographic records in databases to which large numbers of libraries contribute cataloging records. Savings obtained from sharing machine-readable records, however, are not sufficient in the present days of budget limitations to permit large or specialized libraries to rapidly catalog to full levels all items received. To provide the best possible service with available staff, libraries must find ways to use staff time even more efficiently.

Minimal-level cataloging standards
Earlier efforts to economize resulted in the development of standards for "minimal level cataloging" to be shared in the bibliographic networks. In North America, utilities such as the Online Computer Library center (OCLC), the Research Libraries Information Network (RLIN), and UTLAS have all established cataloging record standards for members. In 1978, the *National Level Bibliographic Record-Book*, prepared for the United States Library of Congress, proposed a minimal level monographic cataloging standard for machine-readable records, indicating appropriate fullness of bibliographic data and MARC field designation. As the Introductory Statement indicated, this document "contains the specifications for the

data elements that should be included by an organization creating cataloging records in machine-readable form for its own use, which will also be acceptable for sharing with other organizations or for contributing to a national database."[1] The statement also indicated that "<t>he minimal level record is designed to provide the information needed to identify an item, i.e., the complete descriptive block, from title through series, in accordance with ISBD (and AACR), plus ISBN and call number (or other shelf number) and, for author access where appropriate, a main entry."[1] It was noted that a minimal record did not need to be limited to those specified elements, but that those must be included to meet the standard.

The second edition of the *Ango-American Cataloging Rules (AACR2)*, also defined a brief descriptive cataloging standard, termed "Level One." A Level One record must contain the title proper, first statement of responsibility, publisher's name, date of publication, and extent of the item as an absolute minimum. Working from *AACR2's* recommendations, many organizations have established two levels of standards, one for the content and its designation necessary to declare a record will be recognized as full cataloging and the other for a minimal cataloging record suitable for sharing. To meet the minimum acceptble standards of OCLC and other networks, somewhat fuller cataloging than *AACR2* Level One is often required and the intent is that most minimal records will be enhanced by other network participants to include full cataloging information at some time in the future.

OCLC's Bibliographic Input Standards state that the network, working with its advisory groups, "has established Level I and Level K input standards for original cataloging. Level I represents full or complete cataloging; Level K represents less-than-full or minimal-level cataloging. In theory, the Level I standard is to correspond to the second level of description set forth in AACR2 1988 Revision rule 1.0D2, and the Level K standard should correspond to the first level of description in AACR2 1988 Revision rule 1.0D1. However, in practice, these corrrespondences are often not exact. Differences may occur because data that is not required by cataloging rules may be required for operation of the OCLC Online System."[2] (emphasis mine). Computer-based catalogs involve an additional level of complexity that makes efforts to simplify the cataloging process even more difficult.

Examination of requirements for full cataloging

In addition to the trend toward the development of widely acceptable standards for minimal cataloging records, an interest has arisen is simplifying the requirements for records that will be acceptable as full cataloging. This consideration is likely to become even more important as the MARC formats continue to undergo constant review. In the United States, an American Library Association Committee on Machine-Readable Bibliographic Information (MARBI) conducts an on-going investigation of the form of representation of machine-readable cataloging and makes recommendations for changes in the US/MARC format. This committee includes representatives from the Association for Library Collections and Technical Services, the reference and Adult Services Division, and the Library and Information Technology Association as well as liaisons from other special groups, such as the Music Library Association, who share a common interest in economical creation of effective machine manipulable bibliographic records. MARBI's recommendations are influenced by questions of efficiency as well as accuracy.

The routine five-year review cycle for the formats for International Standard Bibliographic Description offers similar opportunities to re-examine the effectiveness of these standards in helping libraries to fulfill their service missions. The acceptability of shared cataloging records must be foremost in any consideration throughout the world, but ideas of what is "acceptable" are necessarily affected by a library's individual production and service needs. In the U.S., it is an accepted fact that libraries use each other's cataloging records in order to

accomplish more cataloging and thereby provide greater access to their collections more rapidly than would be possible if original cataloging were required for every item added to the library's holdings. Each library must establish a policy regarding what kinds of cataloging records it will accept without change and how much it will alter records it judges to be inadequate to its needs. It must also decide how much material of which kinds it will catalog originally to make access rapidly available to it's own user community as well as to contribute a "fair share" to a cooperative network database where the library's original records will then be used by others to improve their cataloging productivity. The current lively exchange of records internationally allows libraries world-wide to use work done in other countries to supplement local cataloging records. The accessibility of these records raises a broad range of questions about acceptance of different cataloging practices.

Bibliographic networking

Bibliographic network participation implies agreement about the useability of records from all included sources. Since development of UNIMARC has permitted ready distribution of records internationally, participants in cooperative utilities frequently are able to make use of cataloging records from outside their own countries. Canada and the United States have a long tradition of sharing bibliographic records and their libraries now have greater access to records from other sources. OCLC members, for example, today find UKMARC records available for many items and records contributed by France are also beginning to appear in the OCLC database.

Participation in a bibliographic network also assumes that all members will be willing to contribute to the common good by furnishing cataloging records for use by others. Such membership requires a good-faith effort to meet official network standards for records contributed. Records meeting various levels of cataloging standards may be acceptable, but they must be appropriately designated as to their degree of fullness. Participants must be able to rely upon each other's contributions with confidence that there is a common understanding of record content identification. If such agreement did not exist, all records would be considered unrealiable and therefore require constant review by any library concerned with the quality of its catalog. Because such agreement has been made, it is possible to distribute work to suitable levels of staff with some confidence that full cataloging records from others can be locally processed by staff who are not as highly trained a professional catalogers. Because original catalogers are expected to be more knowledgeable and must therefore be more highly paid, most libraries can afford only a limited number of such staff and must rely upon support staff to accomplish much of their processing. Budget processures may also affect cataloging practices at various libraries to the extent that it is not possible to match their theoretical standards of quality. Economic considerations which mandate sharing of cataloging efforts by using records produced by other libraries also limit the ability of libraries to bring minimal records up to full cataloging.

Trends toward greater complexity

Given the budgetary considerations that have already been noted, it is reasonable to wonder why cataloging standards have apparently increased in complexity in this age of automation. Automation has played a role in these developments. One problem has arisen as the MARC formats have evolved to more effectively serve to maintain, exchange and display bibliographic information. Early versions of the MARC formats accommodated the then-current cataloging rules. The adoption of AACR, which had a substantial effect on formatting requirements, did not result in the wholesale change of all older catalog records. Various other format decisions made in the early days of library automation have also changed over

time, causing fields, sub-fields and indicators to become obsolete, although still present in some records created earlier. Fortunately, recent work to achieve Format Integration, or the establishment of consistency in formating requirements for all types fo materials from books and serials to printed music and visual materials offers promise for future simplification. To the extent that Format Integration allows computer conversion of coding, it will alleviate problems with older records.

Complexity in record coding, however, may continue to be fostered by the fact that machine manipulation of coded data in cataloging records offer very attractive possibilities for improvements in public service beyond those which could be provided by the traditional card catalog. When it is possible to sort records by such options as geographic area of publication, by date and language of publication and by words in the text of notes as well as titles, including as much data with as specific content indications as possible becomes a matter that deserves serious consideration. Increased information retrieval options cannot be easily rejected and it can be argued that if only one library needs to expend the effort to catalog a title initially so that any others may use that record, why shouldn't the cataloging be as inclusive as possible? Can't we all afford to catalog a very small number of titles to the fullest standard? Perhaps so, but perhaps not even that level of effort can be contributed by some libraries. One reason that some libraries are less able to contribute at the fullest level is that that level has become so demandingly complex that not all competent cataloging staff are working at levels that match it. Does that mean that we should not ask them to contribute anything, or should they provice records at some less complete level?

International record exchange considerations have been influential in increasing the complexity of cataloging standards because, in some countries, needs are perceived for specificity in aspects of description that extend far beyond those recognized by other countries. Requirements within countries may vary greatly too. For example, some U.S. academic libraries have far more exacting standards than others. Is it necessary for all cooperating libraries to meet the needs of the most demanding in order to make a contribution? Both bibliographic network advisory groups and librarians elsewhere argue convincingly that some limits to requirements are appropriate. Even an author of the *Anglo-American Cataloging Rules*, Michael Gorman, has advocated some simplifications, particularly as they might allow staff in public service departments to contribute effectively to cataloging production. The organization of the library at the University of Illinois at Champaign-Urbana underwent changes in this direction during Mr. Gorman's tenure in the library administration at that institution. Most staff system-wide were expected to provide both public and cataloging services. Similar practices have often been followed in branch libraries in academic institutions.

Acceptance of decisions made by the Library of Congress

In the United States, cataloging decisions throughout the country are strongly affected by the policies of the Library of Congress. LC provides a significant portion of the authoritative cataloging produced in the U.S. and its records are used by preference when cataloging from more than one source is available. LC/MARC records replace member-contributed bibliographic data in the OCLC network. Because in that database only one record is retained as the "master copy," the OCLC network. Because in that database only one record is retained as the "master copy," the OCLC membership has decided that a full cataloging record from the Library of Congress will be considered definitive and will therefore replace any previously contributed record. LC's cataloging is preferred for consistency and uniformity of rule interpretations to that of other libraries. (This is not to say that many other libraries do not observe a high cataloging standard).

Recently, the Library of Congress has begun special efforts to simplify cataloging, both to achieve economies in the costs of processing materials and to help to eliminate a substantial backlog of items awaiting cataloging. When LC adopted the 1988 Revision of *AACR2*, several actions were taken to begin to simplifying cataloging. Although only three details of bibliographic description were involved, they were perceived to require a significant amount of time that resulted in only limited benefit. These decisions were:

1) to cease counting the pages of unpaged books, and to use "1 v. (unpaged)" instead, except for children's books and for rare books.

2) to cease indicating particular types of illustration in most cases, routinely using "ill." instead.

3) to cease giving the several types of notes for bibliographic citations, using the single not "Includes bibliographical references," with some additions of pages for single bibliographies, instead.

Announcement of these decisions was made in January 1989.[3]

That the 1989 simplifications were the beginning of a trend is evidenced by more recent proposals from the Library of Congress regarding simplification of the ISBD(M). The current focus on the standard for monographs reflects the recognition that trying to accommodate the features of all types of publications has added greatly to the complexity of cataloging requirements and it is appropriate to review possibilities for simplifying the effort needed for books, the most common form of materials.

ISBD simplifications possibilities

One way of making ISBD(M) easier to use, even without removing any of its requirements, is to move the "stipulations concerning relatively uncommon complex situations to an appendix."[4] Instructions for handling such cases as parallel titles, mostly consisting of titles in multiple languages, would thus not be embedded in the full set of rules themselves but would be separately identificable for consultation as necessary. Another possible way to improve useability is to move "stipulations repeated in multiple areas to the beginning of the ISBD as general directives. e.g. instructions regarding the correction of mistakes."[4]

A more debatable proposal, under consideration particularly for contemporary monographic publications, is to rejustify the use of prescribed punctuation to determine if any "might be made optional or perhaps dispensed with."[4] This investigation requires careful consideration of the benefits of all features currently defined. Briefer cataloging records formulated according to such an alternative ISBD(M) would de-emphasize information related to printing and manufacture and simplify some provisions according to a subset of the full standard.

The proposed ISBD(M) simplified

A draft ISBD(M) Simplified, submitted by the U.S. Library of Congress, is currently under discussion by the IFLA Standing Committee of the Section on Cataloguing, its ISBD Review Committee and a special working group. It offers some cautious but real alternatives, particularly in the areas already mentioned. Bibliographic agencies are welcoming proposals for ways to coordinate cataloging simplifications efforts to produce records that should continue to sufficiently identify the item, retain interchangeability between agencies in different countries and, in addition, allow quicker and easier creation of the records. As proposed, the ISBD(M) Simplified is not intended to be a complete substitution for the full standard, but rather to be used by libraries wanting to adhere to a less complex but still consistent standard for cataloging record creation, especially for current materials. Although the initial proposals are targeted primarily for libraries that are not the national agency which provides the definit-

ive cataloging records for materials it processes, they are likely to be the beginning of further simplifications of great importance to all libraries.

Relationships between cataloging standards

It should be remembered that the ISBDs themselves are only a portion of the standard applied to cataloging. They are incorporated in cataloging rules, such as *AACR2*, and applied in conjunction with headings formulation and subject control standards, as well as others related to such requirements as machine-readable formatting adn content designation. It is difficult to make rapid progress when attempting to change any of these inter-related standards. Economic pressures are perhaps the most likely to encourage changes, particularly if those changes will improve libraries' abilities to process materials efficiently with available staff. As mentioned earlier, most libraries are finding it almost impossible to afford to provide the maximum amount of descriptive information that might ideally be included in catalog records. Further pressures are now making it necessary to carefully study the importance of data which has been routinely supplied. These pressures are likely to produce close scrutiny of all cataloging standard with the intent of reaching general agreement about a level of cataloging which will be officially recognized as more than minimum and widely acceptable without need for enhancement.

Prospects for cataloging simplification

Despite economic pressures and the resulting reexamination of all cataloging standards, it is unfortunately probable that proposals for simplification will achieve only gradual acceptance. So many factors are involved and what may seem like a less useful requirement to some libraries may appear essential to others. One reason for cautious optimism is that automation has affected the international library community both broadly and deeply, and in a very short period of time. A variety of standards, including those for cataloging have been recently and repeatedly reviewed to assess the impact of the newly developed options for machine-readable databases and access to their information. Because review and modification have become routine, there is hope that further changes can be achieved. Despite recent trends toward increasing complexity in machine-readable bibliographic records, with the inclusion of more data fields, prospects for cataloging simplification have a better chance for success in this era of rapid international communication and wide-spread intent to seize upon means of doing our jobs not just better but more efficiently.

References

1. "DRAFT Introductory Statement Concerning "National Level Bibliographic Records-Books." Prepared by Processing Services, Library of Congress. In *LC Information Bulletin*, November 10, 1978, Appendix.
2. OCLC, Inc. *Bibliographic Input Standards*. 4th Ed. (Dublin, OH: OCLC Online Computer Library Center, Inc., 1990) p. 8.
3. Tucker, Ben R. "Library of Congress Adoption of AACR 2, 1988 Revision." (Washington, D.C.: Library of Congress, January 6, 1989) 2p.
4. "Proposal to Present Guidelines for the Application of ISBD(M) for Contemporary Material." (Washington, D.C.: Library of Congress, August 1989) 3p.

Brief Cataloguing in Card and Online Catalogues

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Abstract
Cataloguing has become more complicated and detailed because of new international rules and because of the MARC format. To reduce costs, it is necessary to consider how bibliographic records can be simplified. In card catalogues brief records can be based on the AACR 2 "level one" description. In online catalogues title and series information should not be left out. Instead the possibility should be considered of a simpler ISBD and a corresponding MARC format based on the principle that information is given once. On the technical side authority files offer a considerable simplification.

Detailed cataloguing rules and bibliographical descriptions

In Norway as well as in other countries throughout the world, the costs of library operations are closely examined. There is no exception for cataloguing. More and more books are published and acquired by the libraries. In addition more non-book material is acquired than in earlier years. National and international cooperation have enforced international rules which are more detailed than the former national ones. So cataloguing has become more complicated and detailed, because of the new international rules and because of the MARC format. Our situation is a vicious circle: There are more documents to catalogue, partly more difficult by content as well as by form. The new rules needed to solve the new problems and to satisfy the wish for the same international practice, have ended up being too detailed to ease one's working situation. The Library of Congress has therefore asked the Standing Committee of Cataloguing to look into the possibilities of creating a simplified ISBD (M) (1.)

In Norway this is clearly illustrated by the cataloguing rules which have been in force during my years in the library profession. As a student at the Library School I was taught cataloguing according to a set of rules that filled 112 pages, including partly different rules for academic and public libraries and including 10 pages of examples. 10 years later, as a cataloguer at the University Library of Bergen, I had to adjust to new Norwegian rules, a book of 146 pages in a somewhat bigger format. This time with one set of rules for all types of libraries and with 15 pages of examples. About 10 years later, then a lecturer at the Norwegian School of Library and Information Science, I started to teach cataloguing according to IFLA's ISBDs and a couple of years later according to the Norwegian adaption of AACR 2. This is a book of 610 pages. In addition a collection of examples of 168 pages is published separately. Teaching cataloguing I experienced the need of more lessons and yet felt that less competent cataloguers were educated.

In fig. 1 a certain book is followed through the Norwegian National Bibliography, catalogued according to four editions of cataloguing rules. The entry grows from four lines to nine. Partly this is due to more information in the book itself (new edition, new publisher, ISBN) but mostly it is due to a more detailed description.

Abbreviated bibliographic records

In journal articles in English the term "minimal-level cataloguing" (MLC) seems well established – even though there is no common standard for brief cataloguing. As well the ISBDs

as AACR 2 have paragraphs which say that the rules provide a maximum set of information and that the catalogue department may choose to pick out the elements it needs. AACR 2 formalizes this to three levels of description and lists elements that "at least" should be entered.

In Scandinavia Denmark has been in the lead discussing bibliographic levels. The discussion started in the library journals in 1986. The last contribution is a report published by Bibliotekcentralen (the Danish Library Bureau) 1989–90 (2). The report contains a detailed examination of elements which may be omitted in the description.

Norway has no generally accepted policy for creating abbreviated bibliographic records. Most Norwegian libraries state, when asked, that they use an extended first level, but which elements are included differs. The Norwegian Committee on Cataloguing organized a seminar in 1987 where simplified cataloguing was discussed. Further a collection of examples of the "level one" description was published in 1987 (3) by initiative of the Committee. It will probably have a standardizing effect on brief cataloguing. Fig. 2 shows the same book catalogued according to "normal" cataloguing level and to level one. It might be observed that a brief catalogue entry will include class number and subject heading (provided the library has a dictionary catalogue). MLC on the other hand seems to leave out classification and subject headings.

Brief records in the card catalogue

The way of abbreviation which is represented in "level one" reflects the card catalogue. The obligatory access points of the card catalogue are author, title, subject heading (or in Europe often class number). Some catalogues also include other persons responsible for the work (for instance editors, illustrators and translators) and titles of series. The elements included in the description have usually been seen in connection with the access points: elements which will not lead to an additional card, need no specification in the main entry. So, as a subtitle rarely is entered in the catalogue, it is also often left out of the description. The same applies to names of translators, illustrators, other statements of responsibility and to titles of series: if no added entry is wanted, the additional statement of responsibility is not included in the description. This practice of brief records functions rather well in the card catalogue.

Brief records in the online catalogue

In the online catalogue, however, the traditional way of abbreviating records should be reexamined. The online catalogue usually offers possibilities for searching that are unique: all words (except a few "stopwords") of the description can be searched and combined in different ways by Boolean operators. It is therefore a restriction of search possibilities to leave out subtitles and series.

As stated above, the new cataloguing rules introduced more details in cataloguing. This certainly also applies to the MARC format, which is used by most electronic systems which participate in exchange of data.

Firstly the writing of tags, indicators and subfield codes which start each field and subfield of the format (tag 100 etc., $a etc.) represents additional work. It is true that some catalogue modules have formated screens with background text which make it unnecessary to write the tags and subfield codes – at least for the most common fields and subfields. But then, on the other hand, one must often go back through several screens if some information is forgotten.

Secondly the MARC format offers possibilities for entering information in addition to the bibliographic description. Such information is found in the first fields of the format, for instance in field 008, and includes details like the language of the text, of the original, the intellectual level, the nature of contents etc. All information entered enriches the search

possibilities of the catalogue or, if not every subfield or MARC position is searchable online, the possibilities of producing printed lists. On the other hand, every additional information code or word or abbreviation that is entered, make the cataloguing process longer and more expensive.

Can the time spent on cataloguing in Opacs be reduced?

On the technical side a considerable simplification is offered by systems which permit the use of authority files. Such files can be built for authors and other persons responsible for a work, if desired including persons as subject, subject headings/Dewey class numbers, titles of series and uniform titles. A given name (or subject heading or uniform title) is entered in the authority file once and for all and linked with a special command to the actual records. Time is saved in writing and in proofreading.

Concerning the information that is entered we have to decide whether we produce records for a card catalogue or an online catalogue. Still many systems are planned for both functions: the online catalogue also produces catalogue cards, printed book lists and even national bibliographies. But in several environments the online catalogue is the chief product and the printouts are considered by products of less importance.

In the MARC format information is rather often repeated. It is given in natural words in some fields and repeated in coded form or in a more standardized form in other fields. For instance the statements of responsibility are written in the terms of the document, according to the AACR 2 rules, in 245 $c: "by John Lewis; with illustrations by Peter Brown". The names given in this MARC field are usually also given in 1xx and 7xx. Information given in field 5xx in a standardized form according to the catalogue rules for notes, is often repeated in field 7xx. These are just a few examples – there are several more cases where information is repeated.

In Denmark a standardized minimum MARC format for the research libraries has been worked out. The format introduces the principle that information shall be given once in the format and determines which fields to chose. For instance authors shall be given in 7xx (where main and added entries are placed), not also in the bibliographic description in 245 $c. If a library wants to include this subfield, it is filled in automatically by the system from the 7xx field.

In Norway as well, while working out a new NORMARC format (=Norwegian MARC format), some cataloguers have discussed the possibilities of introducing a similar principle.

Some examples:

As described above, names of authors and other persons responsible for the work should be entered in 1xx and 7xx, not in 245 $c. This would mean that all names of persons responsible for a document are entered in inverted form only. As the level one description allows this for one author, it is not a drastic new principle. A designation of function in 700 $e would explain the person's relationship to the document, for instance "ed.". The problem of varying name forms could be solved by references given in the name authority file and/or in 9xx. For instance, if all documents by Karen Blixen are entered under this name in 100 the authority file will include the reference "Dinesen, Isak see Blixen, Karen". The records of the documents with the author Dinesen will be entered under Blixen, but the reference "900$aDinesen, Isak$zBlixen, Karen" will indicate that this doument was written under the name of Dinesen. Further should information on additional contents not be entered in 5xx but in 7xx. Subtitles should not be given in 245 $b but in 740. Or the subtitle field (245 $b) should be made automatically searchable like 245$a.

A new way of presenting the record to the library patrons would probably create no problems. Already several OPACS present the bibliographic information in a layout that differs

from a traditional catalogue card, for instance by using explanatory text at the left part of the screen. An example from a Norwegian system is given in fig. 3. Several patrons are familiar with quite different formats or layouts from searching in commercial bibliographical databases like Dialogue, where one can choose between eight different display formats.

Fig. 4 gives examples of traditional MARC entries and brief entries according to the ideas presented above. An OPAC display format is also suggested.

Finally, it should be considered to drop some details of the description, for instance the use of enclosing information actually found in the document in sharp brackets, semicolon, and the counting of plates which represent a small part of a document.

Conclusions

Cataloguing for online catalogues could be simplified by:

1. A new and simpler ISBD and a corresponding MARC format based on the principle that information as far as possible is given once.
2. Catalogue systems with authority files.

References

1. Proposal to present guidelines for the application of ISBD(M) for contemporary material /the Library of Congress. – 1989. – 3, 3 p.
2. Niveaugruppen. Bibliotekcentralens bibliografiske niveauer : rapport. – Ballerup : Bibliotekcentralen, 1989– . – v. 2 volumes published 1989–1990, vol. 3 is expected medio 1990.
3. Spangen, Inger Cathrine. Katalogisering med laveste fullstendighetsgrad i beskrivelsen : eksempler med kommentarer. – Oslo : Norsk bibliotekforening, 1987. – 158 s. : faks.

Fig. 1. *Examples illustrating the growth of details of Norwegian cataloguing rules*

The Swedish author Astrid Lindgren's book "Rasmus and the tramp" as catalogued in the Norwegian National Bibliography according to four different editions or rules:

Lindgren, Astrid (sv) Rasmus på loffen. (Rasmus på luffen.) Overs. av Jo Tenfjord. Tegninger av Eric Palmquist. 1957. Nationaltr. 166 s. bl. Damm ib. 8,50 u 839.73)	Katalogiserings-regler for norske biblioteker 3. rev. utg. Oslo, 1955
Lindgren, Astrid (sv) Rasmus på loffen. (Rasmus på luffen.) Illustr.: Eric Palmquist. Overs. av Jo Tenfjord. 2. oppl. Oslo 1972. Nationaltr. 166 s.bl. Damm ib. 18,50 (U 839.73) ISBN 82-517-9240-1 (F)	Katalogiserings-regler for norske biblioteker 4. omarb. utg. Oslo, 1971
Lindgren, Astrid Rasmus på loffen / Astrid Lindgren ; oversatt av Jo Tenfjord ; illustrert av Eric Palmquist. – Oslo : Damm, 1978 (Stavanger : Dreyer aksjeselskap). – 207 s. : ill. (U 839.73) Originaltittel: Rasmus på luffen. – 1. norske opplag 1957. ISBN 82-517-9240-1 ib.: n.kr. 47,50	–"– for headings and ISBD(M) London, 1978
Lindgren, Astrid Rasmus på loffen / [Astrid Lindgren] ; oversatt av Jo Tenfjord ; illustrert av Eric Palmquist. – [Bokmålsutg.]. – [Stabekk] : Bokklubbens barn, 1983 (trykt i Belgia). – 208 s. : ill. ; 23 cm. – (839.73 U) Originaltittel: Rasmus på luffen. – 1. norske utgave: Oslo : Damm, 1957. ISBN 82-525-0929-0 (ib.) : Ikke i bokh.	Katalogiserings-regler : Anglo-American cataloguing rules, second edition Oslo, 1983

Fig. 2. *"Normal" and brief cataloguing*

443 Høst, Gunnar
H Fransk-norsk, norsk-fransk = Francais-norvégien, norvégien-francais / Gunnar Høst. – 8. oppl. / rev. av Gunnar Høst og Thorvald Nebell. – Oslo : Damm, 1961. – 313 s. ; 14 cm. – (Damms lommeordbøker)

1. utg. 1933

E.: Fransk språk-Ordbøker
I. Nebell, Thorvald
T.
Parallellt.
Ser.

443 Høst, Gunnar
H Fransk-norsk, norsk-fransk. – 8. oppl. – Oslo : Damm, 1961. – 313 s.

1. utg. 1933

E.: Fransk språk-Ordbøker
T.

Fig. 3. *OPAC display format of the Norwegian automatic library system "BIBLIOFIL"* (English translation of the explanatory terms in brackets)

HYLLEPLASS	(CALL NO.)	:	150.195 Freud, S.
FORFATTER	(AUTHOR)	:	Braad Thomsen, Chr.
TITTEL	(TITLE)	:	Sigi Erobreren : en Freud-biografi
ANSVARLIGE	(RESPONSIB.)	:	Chr. Braad Thomsen
PUBL. INFO	(PUBL. INFO.)	:	København : Hans Reitzel, cop. 1984
SIDER	(PAGES)	:	196 s.
NOTER	(NOTES)	:	Bibliografi: s. 191–192
EMNEORD	(SUBJECT HEAD.)	:	Freud, Sigmund, øst., 1856–1939
ISBN		:	87-41-23795-1
TITTELNR.	(TITLE NO.)	:	(31012)

HYLLEPLASS	(CALL NO.)	:	910.3 G
TITTEL	(TITLE)	:	Geographic encyclopaedia for children : picture maps and illustrations
ANSVARLIGE	(RESPONSIB.)		by Wilhelm Eigener and August Eigener
PUBL.INFO	(PUBL.INFO.)	:	London : Hamlyn, 1967
SIDER	(PAGES)	:	257 s. : kol. ill., kart
NOTER	(NOTES)	:	Ett kart på innsiden av permen
EMNEORD	(SUBJECT HEAD.)	:	Geografi-Leksika
TITTELNR.	(TITLE NO.)	:	(7392)

Fig. 4. *MARC format today, suggested new MARC format and suggested OPAC format*

019 $dR (R means "novel")
020 $a82-03-16075-1$bib.
100 $aGulbranssen, Trygve
2451 0$a0g bakom synger skogene ; Det blåser fra Dauingfjell ;
Ingen vei går utenom$cTrygve Guldbranssen
260 $aOslo$Aschehoug$c1989
300 $a649 s.
440 $aEn Gigantbok fra Aschehoug
500 $a1. utg. av de separate bindene henholdsvis: 1933, 1934 og 1935
655 $aBygd
655 $a Historisk
7002 $aGulbranssen, Trygve$tDet blåser fra Dauingfjell
7002 $aGulbranssen, Trygve$tIngen vei går utenom

019 $dR
020 $a82-03-16075-1$bib.
100 $aGulbranssen, Trygve
2451 $aOg bakom synger skogene
260 $aOslo$bAschehoug$c1989
300 $a649 s.
440 $aEn Gigantbok fra Aschehoug
500 $a1. utg. av de separate bindene henholdsvis: 1933, 1934 og 1935
655 $aBygd
655 $aHistorisk
7002 $aGulbranssen, Trygve$tDet blåser fra Dauingfjell
7002 $aGulbranssen, Trygve$tIngen vei går utenom

FORFATTER	(AUTHOR)	:	Gulbranssen, Trygve
TITTEL	(TITLE)	:	Og bakom synger skogene
PUBL.INFO	(PUBL.INFO.)	:	Oslo : Aschehoug, 1989
SIDER	(PAGES)	:	649 s.
SERIE	(SERIES)	:	En Gigantbok fra Aschehoug
NOTER	(NOTES)	:	1. utg. av de separate bindene henholdsvis: 1933, 1934 og 1935
ANDRE TITLER I SAMME BIND	(OTHER TIT.IN THE SAME VOL.)	:	Gulbranssen, Trygve: Det blåser fra Dauingfjell
		:	Gulbranssen, Trygve: Ingen vei går utenom
ISBN		:	82-03-16075-1 (ib.)

Fig. 4. *MARC format today, suggested new MARC format and suggested OPAC format* (continued)

```
082    $a796.342
100    $aGonzales, Pancho
2451   4$aThe tennis book$bhow to play and win at tennis$cby Pancho
         Gonzales & Dick Hawk ; edited by Gladys Heldman
250    $a1st British ed.
260    $aLondon$bSouvenir Press$c1963
300    $a123 s.$bill.
500    $aOppr. utg.: New York : Fleet Publ., 1962
650    $aTennis
700    $a Hawk, Dick$emedforf.
700    $aHeldman, Gladys$ered.
740    $aHow to play and win at tennis$eundertit.
```

```
082    $a796.342
100    $aGonzales, Pancho
2451   4$aThe tennis book$bhow to play and win at tennis
250    $a1st British ed.
260    $aLondon$bSouvenir Press$c1963
300    $a123 s.$bill.
500    $aOppr. utg.: New York : Fleet Publ., 1962
650    $aTennis
700    $aHawk, Dick$emedforf.
700    $aHeldman, Gladys$ered.
```

```
HYLLEPLASS   (CALL NO.)        : 796.342 G
FORFATTER    (AUTHOR)          : Gonzales, Pancho
TITTEL       (TITLE)           : The tennis book : how to play and win at
                                 tennis
UTG.         (ED.)             : 1st British ed.

PUBL.INFO    (PUBL.INFO.)      : London : Souvenir Press, 1963
SIDER        (PAGES)           : 123 s. : ill.
NOTER        (NOTES)           : Opprinnelig utg.: New York : Fleet
                                 Publ., 1962
EMNEORD      (SUBJECT HEAD.)   : Tennis

ANDRE        (OTHER RE-        : Hawk, Dick, medforf.
ANSVARLIGE   LATED)            : Heldman, Gladys, red.
```

Current Problems with the MARC/ISBD-Formats in Relation to Online Public Access of Bibliographic Information

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Abstract

The existing MARC/ISBD-formats as a basis for input and output of bilbiographic information are inappropriate for the purpose of online public access. Experiences from two projects involving national bibliographic records at the University Library of Oslo are reported:

(1) a pilot project of brief cataloguing
(2) the design of a simplified display format for a videotex system

A simplified MARC format with inambiguous correspondence between the MARC fields and the main information elements required for online public access is strongly recommended in order to make cataloguing less time-consuming and to make it more easy to adjust display formats for end-users.

Introduction

Although the national bibliographic control is the most central task for a national bibliographic agency the aspect of making the bibliographic information accessible to all kinds of users has been a topic of increased attention during the last years.

The University Library of Oslo has been responsible for the Norwegian National Bibliography for more than a hundred years. The traditional physical outputs have been the card catalogue and the printed bibliography. Due to a rapid development in the field of information technology the national bibliographic files are today accessible in various ways through different bibliographic products.

Computer technology was to be introduced in the production of the national bibliography in 1971 in order to face the current changes in printing techniques, and a Norwegian edition of the MARC format was prepared for this purpose. The microfich catalogues (COM) appeared in the middle of the seventies, and in 1981 the national bibliographic file was made online accessible. The present products also include machine readable records, the total file from 1962 on CD-ROM, and a videotex service.

The national bibliographic activities have two conflicting objectives:

- provide consistant, accurate and comprehensive documentation of national prints according to international agreements with the use of standardized rules
- provide a quick and simple access to this documentation for all kinds of users

A comprehensive survey of user evaluation of the national bibliographic products was carried out in 1989. Different groups of users and non-users were asked to evaluate six different factors of quality. Their priorities were quite inambiguous – actuality was the most important factor, while the level of cataloguing was the least important.

To enhance the actuality of the records it's required that the time used for processing them is reduced. For this purpose there is an urgent need for simplified formats and simplified rules. In this paper I will report some experiences from two different projects involving as-

pects of simplifying work, and indicate why the complex framework of formats (MARC, ISBD) and cataloguing rules (AACR 2) do not promote such efforts.

An attempt with brief cataloguing

As part of a system analysis project to prepare the computerization of the control of documents received by legal deposit about 4.000 units were selected for brief cataloguing. The documents were selected from the backlogs of low-priority materials like pamphlets, booklets and brochures of different kinds.

No specific standards were set up for the cataloguing, except of two important principles:

- each information element should only be given once
- no information elements should be collected from sources outside the document itself

The staff involved were instructed not to pay too much attention to the cataloguing rules, giving the speed highest priority.

From the viewpoint of reducing the time of processing this experiment turned out to be quite successful – the average time for cataloguing a unit was reduced from about 60 minutes for the ordinary cataloguing to about 10 minutes for the brief cataloguing. The quality of the records was however far from satisfactory. The loss of access was probably insignificant, but a brief examination of the records displayed in the ISBD format showed that too many of the records were too incomplete to serve the purpose of bibliographic verification.

This is partly due to the character of the publications being catalogued. Very often this type of material is not supplied with a title page having distinct and inambiguous bibliographic elements, but is formed as a folder or supplied with a cover with rather diffuse statements in a bibliographical sense. Descriptive cataloguing is simply not fitted for bibliographic control of this kind of documents, unless one is able to spend a lot of time determining bibliographic elements and bring in missing elements from sources outside the documents. Extended use of subject indexing could be a possible answer to these problems.

Another central problem was the very bad correspondence between the input format (MARC) and the output format (ISBD). The accessibility was given highest priority in this experiment. Thus, for documents without personal or corporate author, the MARC fields for added entries were used for statements of responsibility in preference to MARC fields displayed in the ISBD-format. For instance, the subfield for statements of responsibility connected to the title (245$c) was not used. Another distinctive feature of this type of material is that publicational data are frequent missing. Very often a corporation of some kind is playing the role of the publisher. Such corporations were registrated in MARC fields for added entries rather then in the subfield for publisher (260$b).

I suppose that the essential issue of reducing the processing time is not the level of cataloguing, but the time spent on deciding name forms and the types or roles of informational elements. This could undoubtedly be helped by using authority control of name forms and a simplified MARC format based on the main informational elements relevant to access and display in an online catalogue, which implies that the close binding between the MARC format and the ISBD format has to be broken.

Simplified display for a videotex service

The inappropriateness of the MARC/ISBD for online public applications was further clearly demonstrated through the efforts of preparing the national bibliographic and the union catalogue files for a videotex system.

The videotex service is run by the Norwegian authority for telecommunications (Teledata), giving access to information from about forty different suppliers, partly by means of gateway technology. The videotex system is user-operated by menues supported by a number of stand-

ard figure-based commands. All text presented on the video screen has a width limited to forty columns. That gives 600 character positions for text display.

Our main issue was the following: how to present full MARC bibliographic records in this environment or end users not trained in online searching techniques and without knowledge of library terminology? We had to design a display format that should be intelligible for the non-librarian and at the same time be satisfactory for bibliographical verification purposes.

A limited number of screens was set up, including database selection, searching, survey of searching result and full-scale record display. Search entries were restricted to personal names and words in title, and the user had to fill in the actual search terms in a fixed field search screen.

For the full-scale display of records the use of leading texts was recommended in spite of being more space consuming than the ISBD format. The first draft included the elements of author (personal, corporate or conference), title (including sub-title), publisher, place of publication, year of publication and a field named "other information" (intended for multi-volumes). The format and its corresponding MARC fields are shown in fig. 1.

The pilot version was tested and it was found quite dissatisfactory for the purpose of bibliographical verification. The main problems are listed below:

- incomplete information elements; individual bibliographical fields very often cut off
- author field empty when title is used as main entry
- missing display of many personal names used as search terms because they have been registered in the MARC subfield of responsibility (245$c) or as added entries (7XX)
- extensive use of abbreviations or other simplified notations for institutional publishers
- from a non-librarian's point of view almost identical information in the fields of author and title when formalized terms as conference names or uniform titles are used as main entries.

A new draft was then worked out and a more refined computer routine for extracting data from the MARC record as well. The display format and the correpsonding MARC fields are shown in fig. 2. The field "other information" was dropped, leaving more space for the remaining fields. The number of fields was reduced form six to four, commented below:

AUTHOR, EDITOR, ETC.: All names of persons and corporations representing responsibility functions are displayed in this field regardless of being usesd as main or added entries. Personal names are given preference to corporate names. Names of conferences and uniform titles used as main entries are not displayed. The role of the responsibility is quite often of minor interest to an end-user, and might be added in brackets.

TITLE: The subtitle(s) is of vital interest both for retrieval and display purposes, and it is displayed as complete as possible.

PUBLISHING INFO: The three individual information elements has been put together in one string of text as the meaning of the different elements is obvious.

SERIES: The series title is included because it is very useful in documentation of scientific publications and report literature. The series title quite often brings the complete name of the institution responsible for a publication, and the cataloguing rules permit abbreviated forms in the publisher field.

In the writing moment this version has not yet been tested, and it remains to be seen how it works. However, I am able to point out, before any testing is done, several records from the national file being too complex to be displayed in a satisfactory way using leading texts.

Conclusion

Through the two different practical approaches being referred to I have attempted to indicate how the existing MARC/ISBD-formats, matching the cataloguing rules (AACR 2), are complicating the effort of making bibliographic information accessible for non-professionals. The task of combining the responsibility for national bibliographic control and the dissemination of bibliographic information is indeed not a simple one.

The MARC-format was originally prepared for the purpose of automatic production of printed catalogues, and the provisions of the ISBD-formats are mainly directed towards printed catalogue entries. The framework of the MARC-format have a structure that is principally identical with the card catalogue, with the elements of headings, main entries, added entries and references.

During years the format have been object for several extensions in order to serve new functions. This results in forcing the cataloguers to repeat several information when using the format, and is clearly demonstrated in fig. 3, which is showing how some main elements in document retrieval based on bibliographic description are traced in the format.

The strong point of the MARC format is it's data structure supporting variable field lenghts. So indeed, I don't want to drop the format, but what is needed is a simplified MARC-format suited for online catalogues. This format should have an unambiguous correspondence between it's fields and the main information elements required for online access. The appearance of a simplified format would probably have a double effect: increase the efficiency of the cataloguing process and make it more easy to adjust user-friendly display formats.

Fig. 1. Full-scale Record Display for Videotex – First Draft

UNIVERSITY LIBRARY OF OSLO
Documents in Norwegian libraries
AUTHOR:

TITLE:

PLACE: PUBLISHER:

YEAR:

OTHER INFORMATION:

1 RETURN TO SURVEY SCREEN
2 NEW SEARCH 3 SELECT BASE

SURVEY OF DISPLAY DETAILS:

NAME OF DISPLAY FIELD	NUMBER OF CHARACTERS	MARC-FIELDS DISPLAYED
Author	40	100, 110, 111
Title	80	245$a,$b
Place	10	260$a
Publisher	30	260$b
Year	10	260$c
Other information	200	505

Fig. 2. Full-scale Record Display for Videotex – Second Draft

UNIVERSITY LIBRARY OF OSLO
Documents in Norwegian libraries

AUTHOR, EDITOR, ETC.:

TITLE:

PUBLISHING INFO:

SERIES:

1 RETURN TO SURVEY SCREEN
2 NEW SEARCH 3 SELECT BASE

SURVEY OF DISPLAY DETAILS:

NAME OF DISPLAY FIELD	NUMBER OF CHARACTERS	MARC-FIELDS DISPLAYED
Author, editor, etc.	80	Primary: 100, 110, 70010 Secondary: 70011, 70021
Title	160	245$a,$b
Publishing info	80	260$a, $b, $c (displayed in the form: $a, $b, $c) Secondary (for $b): 71021
Series	80	Primary: 440 Secondary: 490, 495

Fig. 3. Duplication of Information in the MARC Format

INFORMATION ELEMENT	MARC FIELDS
Title information	130, 245$a, $b, 500, 730, 740
Responsibility information	
Persons	100, 700, 245$c
Corporations	110, 245$c, 260$b, 440, 490, 710, 840
Publication information	245$c, 260, 500

This table shows how some main information elements based upon descriptive cataloguing are spread in the MARC format, and how these elements could be traced in different MARC fields.

The Impact of CD-ROM on the End-User

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Abstract
The paper considers the experience of users in dealing with this new technology. Its advantages and disadvantages are considered and it is concluded that, on balance, the technology is of benefit.

In April 1990 King's College hospital celebrated its 150th Anniversary with a service of thanksgiving in Westminster Abbey. As part of the service, various items were carried to the high altar and blessed, they included early medical instruments, newly created drugs – and a compact disc of the MEDLINE database. Interestingly, this was carried by a professor of immunology and not by a librarian. The following day this service was reported in the Court pages of *The Times* (1), since Princess Anne, the Princess Royal, had attended the service. We can thus safely assume that, blessed by the church, attended by royalty and carried by a professor, the compact disc has arrived safely as a part of the established order of things. However, there are already dissenting voices which have begun to stress the limitations of CD and to suggest that its status and importance will come to be seen as comparable to microform (2). This paper will look at the advantages and disadvantages from the perspective of the user in an attempt to assess the value of the technology.

Most of the advantages may seem evident, but that makes them none the less important. The first of these advantages lies in the presentation of the data. Although this varies from product to product, some trends are obvious. The use of colour, of windows, of highlighting and of menus, make searches and search results much easier to comprehend than the often cramped, printed format of most large reference works and bibliographies and is substantially in advance of the sort of presentation achieved by even the best on-line library catalogues. We face some years before all networks are upgraded to the point where they will be able to deliver comparable presentation facilities.

The second advantage lies in the sheer power of the system, although it is true that in general on-line databases possess the same facilities. Boolean searches, the ability to combine terms and to combine the results of several searches provide enormous capabilities. It has been the common practice in libraries to use a librarian as an intermediary for on-line searching and it is therefore only with the arrival of CD that most users have managed the power of these search features for themselves. Quite complicated searching which in the past was either impossible or inordinately time-consuming quite suddenly lies within the reach of anyone performing research. There is a certain almost intoxicating effect in having the ability to control this power and personally to undertake difficult tasks.

Thirdly, the absence of an intermediary allows two benefits. Firstly the absence of telecommunications charges allows the user to browse at will through the file. It is possible to use the privacy afforded to ask peculiar or arbitrary questions, sometimes with serendipitous results. Most researchers will stress the value of chance whether in browsing through shelves of books and journals or browsing through a database. It has been commented on that a notable feature is the repeated use made by individuals (3). Where academic researches may use on-line searches mediated by the library on average once a year, it is clear that CD may be used

more than once a month. It is quite simple to follow a stray thought or idea on a casual visit to the library which the user would not bother to follow up when faced with the need to make an appointment with an information specialist perhaps a week ahead.

Fourthly the systems are simple to use. It is possible to sit down and achieve results almost immediately. Friendly menu-driven systems allow the uninitiated to conduct searches within minutes. It has to be said that this is a two edged benefit. Almost all the library literature stresses the need for the training of users, and, indeed at least one library has made it compulsory (4). Because a technology appears easy to use and produces results does not mean that the naive user can use it efficiently and effectively. Many databases do not make it clear that the set of information they contain is partial, or that certain sets of knowledge are assumed. For example, one database on modern literature cites all titles in the original language and assumes that users will know this. Thus a user searching for information on Ibsen's play 'A Doll's House' will find nothing unless the original Norwegian title is used. Because there are no standards and no consistency between products, the user is very much at the mercy of the system designer. This criticism can be overplayed however. Most libraries spend more on reference books than on CD products, but no library insists that the user of a reference book must undergo training in its use or have the assistance of a qualified librarian for every book they open.

Fifthly, a subsidiary benefit which some libraries make available is the ability either to print out or download search results, which can then be removed from the tedium of copying from reference works. Some exciting developments are also being made by American libraries in linking the search results to the library catalogue. It thus becomes practical to conduct a search, save the results and in the same computer session compare these with the library journal holdings to check on availability (5). It is only a tiny step to request the articles instock using electronic mail. The whole process of search and retrieval of information becomes almost a single operation rather than a sequential one requiring interaction with several parts of the library. As an implicit and accidental subsidiary benefit, there should be an improvement in the quality of bibliographic citation. Once a standard citation or bibliographic entry is downloaded from a CD to a personal computer it can be re-used in booklists or other publications and will always be correct – or at least as correct as the original source.

Sixthly, there is the general issue of accessibility. This has several aspects. The CD is in the library and readily available, at least during opening hours. From the users point of view it is all too easy to forget the sheer physical difficulty of conducting an extended search in a work such as the British Library Catalogue of Printed Books, consisting of several hundred volumes shelved at heights varying from ground level to two metres. Further, many libraries are conducting extensive experiments into networking and this again makes the product more widely available. Beyond that, it is clear that CD in not simply a library product. A survey has shown (6) that at least in the UK, around one third of purchases are made outside the library. An increasing number of users will purchase the database which is most central to their activity and use it in preference to the library. Accessibility is also democratised. Many libraries in developing countries and indeed smaller and poorer libraries in developed countries will feel able to purchase or otherwise acquire systems where at the moment they are unable to access the data due to high telecommunications costs. In all cases CD can make available data never previously published, or allow searching in new ways – such as by title rather than author – in publications such as the catalogues of major libraries.

Finally, there are other forms of 'value-added' benefit. Possibly the best example is the incorporation of a Greek language word processor in the IBYCUS system used for the Thesaurus Linguae Graecae CD. This enormously enhances the capabilities of the system, allowing document creation and presentation which pull in data from the CD, as well as

conventional searching. It would be greatly to the users benefit if the concept of adding value to datasets on CD were to grow.

Disadvantages

Naturally, not all is perfect with these products. The complaints tend to fall into two groups, either administrative or technical. Most are capable of resolution, but this will require time and effort on the part of librarians and producers. On the technical side, some problems will remain for so long as the technology, the base from which the library CD developed. Most suppliers will inevitably concentrate on market penetration rather than hardware development, since the library market is scarcely large enough to sustain separately developed hardware.

Most other technical problems relate in some way to standards. With the development of the so-called High Sierra standard for hardware and the notable standards work by the European national libraries, led by the British Library, it might be assumed that most systems were compatible. In practice there is a horrendous variety of software and systems. One report suggests that there may be as many as fifty different command languages (7) and it is unreasonable to expect the user to cope with this. In many cases the system has to be rebooted before a different disc can be used and this makes it difficult for most users to work with a number of systems. Users have to invest a lot of effort in coming to grips with a new technology and there is a clear limit to their tolerance of the varieties of system we offer. Nor are systems always as friendly as they at first seem. In at least one system, repeated use of the Page Down Key quickly fills up the machine buffer and brings such elegant and user friendly messages as "FATAL. Internal stack Failure, System Halted".

One of the touted benefits of CD is the amount of data which can be stored on each disc. Although technical developments are slowly expanding this, disc capacity is really quite small when related to users needs. It may be a technical achievement to put a single year of the *British National Bibliography* onto a single disc, but the user may wish to search a ten, twenty or thirty year file. Changing discs is a nuisance and in some cases searches cannot be stored and repeated without rekeying. Some suppliers have been doing excellent work in developing economic tower stacks which allow severals discs to be searched, but few libraries have yet invested in these.

It is a well known effect of OPAC's that many users cease to use the card catalogue even when it is made perfectly clear that the retroconversion, and therefore the OPAC, is incomplete. The same is true of CD. Users will settle for what is available from the system, even if it is incomplete. More discerning users comment and worry about the time coverage of the CD, but also about the content, for example how many and which journals have been abstracted and indexed. Worries about currency are also there, but this problem is well understood if not approved of, and does not of course apply to stable or retrospective sets of data. A growing and vociferous school of librarians also worries about the nature of the bibliographic data on CD-ROM. It is pointed out that there is a curious contrast between the time and energy we devote to abstracting and indexing every few pages of every journal issue, as compared with the fairly minimal description we give to the contents of a monograph of several hundred pages, although information is usually readily available from dust-jacket, contents pages and index. It is argued that in order to take full advantage of the power of new technology, including CD, we really have to reconsider the nature of the bibliographic record to give the user maximum information. This shift from descriptive to subject cataloguing is evidenced by Book Data, a new company started on the premise that there is a market for this much fuller record (8).

On the administrative side, most problems lie with under-provision. The take up of CD in

the United Kingdom has been much slower than enthusiasts had predicted. There is a certain 'arcade' effect with the technology because of its novelty and quality. As small boys will pretend to play computer games on arcade machines in which they have put no money, CD systems attract staff and students to experiment with systems although they have no real object in view. Few libraries can afford more than one or two systems, far less multiple copies of systems (9). As a result, most institutions have had to develop some kind of booking system in order to ration and restrict use. This defeats one of the major advantages, that of casual, promiscuous and unplanned browsing. This can also introduce a tension with library staff, at least for bibliographic data. Acquisitions and cataloguing staff require to use their working tools in a random and unplanned way, yet this conflicts with the heavy and timetabled use of systems in many libraries.

Many libraries adopt the practice of introducing a charging mechanism for new services. While this is an understandable method of funding the introduction of new services it is an undeniable irritant to find small sums extorted for such things as printing off search results. There seems to be an imbalance to the user between spending thousands of pounds on printed reference works and appearing to charge for the use of another reference work which happens to use a different medium.

Conclusions

CD-ROM has very serious technical limitations which only become apparent when one attempts to use several products. Much of this difficulty arises from an absence of standards in search software of from the inherent limits of the technology. Nevertheless, where libraries install systems and the library is committed to making them readily accessible to the end user, and indeed to customising menus and software for ease of use, the CD becomes easily the most usable tool in the library. Despite reservations on issues to do with training, the user finds the system easy to use and capable of producing results which were previously impossible or which would have required months of effort. At a lower level, complicated searches require seconds rather than hours. This is extremely welcome. Users have a limited amount of time each week for information retrieval, processing and analysis. By reducing the time spent in searching for relevant material, the technology increases the time available for the analysis of documents, thus making the whole research process more efficient. It also, at least to a degree, removes the dependence on 'big' technology and telecommunications so that users throughout the world have, at least in theory, access to data on equal terms and the fear of a developing information rich, information poor divide may begin to recede.

References

1. The Times 5th April 1990.
2. McSean, T. Is CD-ROM a transient technology – and does it matter (paper presented at Workshop on Human Issues in Library Automation, Brussels May 1990).
3. Whitall, Jane CD-ROM in a specialist environment SCIL '89 Proceedings of the Third Annual Conference on Small Computers in libraries London, Meckler, 1989.
4. Lewis, Mike Experiences with CD-ROM in a University Library *ibid.*.
5. Examples of this have been discussed on the PACS-L Bulletin Board organised by Charles Bailey of the University of Houston.
6. Sheilds, D.B. A report on Computer-based Information services in Universities Durham, SCONUL/IUCC, 1990.
7. Richards, Diane Producer's view of CD-ROM for data distribution SCIL '89 *op. cit.*
8. Dempsey, Lorcan Users' requirements of bibliographic records: publishers, booksellers, librarians Aslib proceedings 42 (1990) pp 61–69.
9. Sheilds, D.B. *op. cit.*

The Role of UDC in Finnish Classification Policy

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Abstract

In industrialised countries our society has become very dependent on information related activities. Libraries and other information services should play a key role in providing information to both experienced and inexperienced users. It is a challenge. Finland, as a remote and small country, has some problems to overcome in the field of scientific and technical information. These include:

- limited national research and development efforts, which dictate a great reliance on services from abroad;
- insufficient staff resources and relatively small collections of scientific and technological information;
- a small user community for scientific and technological information, which makes domestic systems costly;
- great distances to international data systems and large libraries abroad;
- great distances within the country between users and suppliers of information;
- and last, but not least, language barriers.

These factors should be taken into account when looking at the classification policies and practices in Finland. Several classification and indexing methods are used for information storage and retrieval, the most common being the Universal Decimal Classification (UDC).

An historical review

The history of using UDC in Finland goes back to the 1940's when rapid post-war industrialisation created a strong need for organised information. The rebuilding of the country and the payment of war indemnities required a transfer of scientific and technological knowledge and practice from abroad. It was partly done with the help of UDC. Large quantities of UDC-classified reference cards were bought or received on an exchange basis. The Finnish Association for Information Services has its roots in UDC, too. In 1949 the DK club was started with some eminent people having charge of its activities: the Director General of the National Technical Research Centre was its chairman.

UDC became popular, and major university libraries started to use it, perhaps encouraged by its multidisciplinary nature: it could be used to order all kinds of materials and documents. Furthermore, there was an international organisation, FID, for management, support and continuation of the system. In a way, the structure of the UDC attracts people. These days computer people are often interested in using UDC in their systems.

Abridged UDC schedules were translated into Finnish in 1956, the same year as the first national UDC course was given. Since then, two more editions have been published, with additions and corrections being produced each year.

Regional cooperation within Nordic countries has resulted in a series of biannual UDC seminars, producing joint resolutions for the revision of various subjects.

Finnish UDC applications

The use of the UDC was surveyed in 1978: 17 out of 30 university libraries used it, with a third of the libraries using no other classification. By 1982, usage had risen further, with 126 libraries using UDC: 44% were industrial libraries, 30% university libraries, and the remaining college and other special libraries. The 1989 survey showed that public libraries have started to use UDC to retrieve information from union catalogues, and from the National Bibliography.

UDC is used in libraries to classify monograph and serial collections, as well as for shelf arrangements. It is also used for bulletins of new acquisitions, and for bibliographies.

The use of different editions varies, although the Finnish abridged edition is used most frequently. Special libraries tend to use mainly medium and full editions. According to Karhula's study, the KAUKO union catalogue was more uniform than had been thought, with about 70% of classes derived from the Finnish edition.

Most international databases do not favour UDC in connection with their indexing. In Finnish databases on the.contrary, UDC is almost the only indexing method used in information storage and retrieval. UDC is applied in a number of ways in automated systems, but with some adaptations and modifications to UDC practice in libraries. Compared with manual methods, computerised systems are much more effective. Book catalogues use it of course, but it is also popular with other reference databases.

In Helsinki University of Technology Library almost all processes in information storage and retrieval have been automated. Elsewhere, more manual work is done, especially at the input, or information storage stage. In 1993, all university libraries will use the Virginia Tech Library System (VTLS). A special UDC version is being made for Finnish users.

In Finland we have made the observation that a UDC-type classification scheme is very good for use with monograph databases. Firstly, they include records in many languages, and it is impossible to remember all synonyms of a certain term in a free-text multilingual search. Secondly, UDC can be useful for searching if schedules are kept as simple as possible and if broader class headings are used systematically. The librarian or information specialist should always remember that classification for online retrieval is undertaken for an unknown person far away, and that precision in assigning classes varies.

Classification research in Finland

UDC has been a matter of interest to classification research workers in Finland for some time. Hovi studied the cognitive structure of classification work. Iivonen reported that organisations affect the result of classification. Special libraries have a greater tendency to look after the needs of their users rather than the large multidisciplinary libraries.

More recently we have become interested in research on UDC computer applications. Karhula's project looked at possibilities for creating a union catalogue using classes produced by a number of libraries. From the end-users' point of view such a concatenation is attractive: the same database could be used by social workers and technologists, each of them using classes familiar to them. However, others held the view that merging UDC schedules in this way would create confusion.

It would be difficult to use a fully-developed UDC system with computers, not least because of the need to use inverse Polish notation. Instead, some kind of indexing vocabulary should be added to the system, as is the case with practically all online catalogues in Finland. UDC classification is often used in a post-coordinate way. This raises the question of the need for indexing vocabularies: Users, supposedly, prefer terms and words to the sometimes complicated UDC class numbers.

The international scene

In 1986, the FID Council approved a new management structure. The scope of the UDC Management Board's responsibilities includes:

- Long-term planning and medium-term plans;
- Policy for the development of the scheme;
- Revision and maintenance;
- Finance;
- Computerisation of the UDC;
- Publishing, marketing and promotion;
- Agreements and other arrangements with publishers;
- Consultative mechanisms regarding the interests of major languages, regions, national UDC committees and UDC publishers.

The Board is advised by:

- FID Classification Department
- Five Coordinating Revision Committees
- Proposals Committee
- Committee on UDC Publication Policy and Relations
- Computerisation Working Party
- UDC Publishers' Consultative Group.

Good progress is being made in revision work in a number of sectors, but much is too slow and there are still serious gaps. The past three years have been dominated by efforts to put into place a new and contemporary approach to revising the UDC, both by reorganising the structure of the revision process (the introduction of Coordinating Revision Committees) and by looking at the development of the scheme itself (the setting up of the Task Force on UDC System Development). Meanwhile, significant improvements to the scheme in several major fields have been authorized in Series 13 of Extensions & Corrections to the UDC (published 1987/1989).

Large revisions in the fields of Finance, Vehicle Engineering, Zoology and Linguistics have been published recently as proposals.

In Technology there is much to be done. High-priority projects for Computer engineering and Electronics have begun, and strenuous efforts are being made to produce a speedy revision of Nuclear Engineering. In the Natural and Life sciences, the revision of Chemistry is nearing completion, and a total overhaul of Physics is in progress. There are smaller projects in Mathematics, Astronomy and Biology. In the Social Sciences, the modernisation of Economics in the UDC is nearing completion with a new section for Business Economics. Updating throughout the Social sciences classes continues, and revisions of Education and Ethnology are proposed. In the Humanities, the development of a modern faceted main class for Religion (to replace the present class 2 which is much criticised for its imbalance and bias) has progressed and is now at the testing stage. An invitation was recently published for cooperation to revise Philosophy.

During 1987–1989 new abridged editions have appeared in 7 languages, sections of the full edition in 8 languages, and one new medium edition.

A Task Force for System Development

As the Task Force report makes clear, UDC is needed, but needed in a form which meets the requirements and technology of the present time, as well as the future. The Task Force recommendations include:

1. A "standard version" of c. 60 000 subdivisions, in English, in machine readable format

should be created. It should be supported by a semantic network and have a much more consistently faceted structure than at present.

2. A consortium of interested institutions should be set up based on the Coordinating Revision Committees, where these are able to undertake the necessary work in the specified time, supplemented as necessary by other institutions to provide both coverage and capability to meet the schedule's requirements. It is understood that the Standard Version is in essence a revised, updated and improved version of the existing UDC such as is capable of being created within two years from the start. It requires the Panel to work in close collaboration with the Coordinating Revision Committee chairmen, and expects some simplification of revision procedures to be necessary.

The survey carried out by the Task Force had the effect of being a major promotional exercise and brought many expressions of willingness to cooperate in creating the new Standard Version. The drafting of a new Guide to the UDC is under way. A collection of papers 'the UDC-essays for a new decade', emphasising the role of the UDC in the modern environment, is published in English.

The UDC Management Board issued a detailed questionnaire seeking information on the use of the UDC, as well as users' wishes and requirements. Because of difficulties in reaching the dispersed community of UDC users, it cannot be said that the returns (from 50 countries) are significant. Replies have, however, provided useful insights into the use of the scheme (e.g. 35% of respondents use the UDC in a computerized system), and interest in the maintenance of UDC.

The Finnish outlook for UDC

The Finnish Council for Scientific Information and Research Libraries has funded a series of studies and work to improve subject searching facilities in Finnish databases. Karhula's content analysis project to improve UDC searching was completed last year. Huiku surveyed the library environment from the point of view of management, classification and information searching, considering particularly classification work, alternative methods, cooperation, maintenance, shared classification and resources. She also collected background data needed for strategic decision-making. In Exhibit 1 the problems of the UDC system are presented from the point of view of users.

The strengths, weaknesses, opportunities and threats of the UDC system in Finland were elaborated in a seminar.

The strength of UDC in Finland is its wide use in research libraries, and in large databases that use UDC. UDC numbers are language independent thus being an important feature in the Finnish library milieu. The hierarchical structure of the system is also very useful in online searching.

It had been thought that shared classification would be a future possibility, at least within the same discipline. However, despite other potential benefits, interrupted processing and the slowness of the maintenance were considered to be problematical.

References

Hovi, Irmeli, The cognitive structure of classification work. In Proceedings of the forty-fourth FID Congress held in Helsinki, Finland, 28 August–1 September 1988. FID Publication 675. 1989. pp. 121–132.

Huiku, Leena, UDK Kirjastoluetteloissa (The use of UDC in library catalogues in Finland). Tampereen teknillinen korkeakoulu. Tiedote 12. 1990.

Iivonen, Mirja, Indeksointituloksen riippuvuus indeksointiympäristöstä. (The dependence of indexing result on indexing environment.) Tampereen yliopiston kirjastotieteen ja infor-

matiikan laitoksen tutkimuksia 26. 1989. 200 p.
Karhula, Päivikki, Use and usability of the UDC in classification practice and online retrieval. In The UDC essays for a new decade. Eds. Alan Gilchrist & David Strachan. Aslib. 1990. pp. 47–54.
McIlwaine, Ia. The work of the System Development Task Force. In The UDC essays for a new decade. Eds. Alan Gilchrist & David Strachan. Aslib. 1990. pp. 19–27.
Strachan, David. UDC revision work in FID. In The UDC essays for a new decade. Eds. Alan Gilchrist & David Strachan. Aslib. 1990. pp. 1–10.

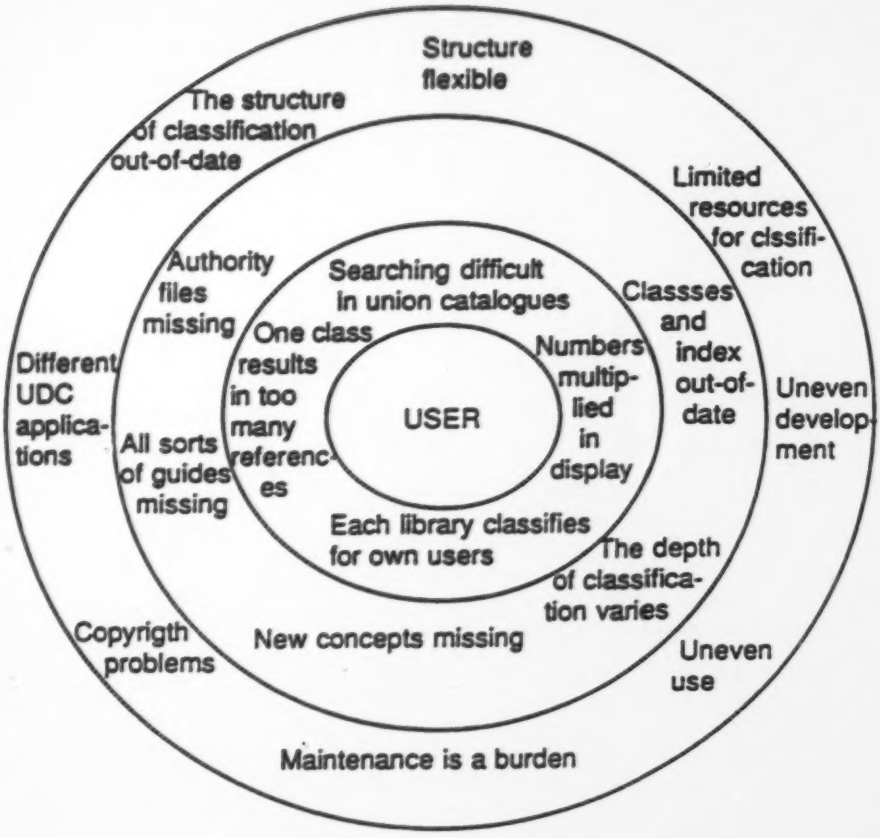

Exhibit 1. *The problems of the UDC system as seen in Finland.*

Exhibit 2. *The strengths, weaknesses, opportunities and threats of the UDC system in Finland.*

Strengths	Weaknesses
- widely used in storage and retrieval - hierarchy - versatile indexing language - multidisciplinary - language independence - numbers easier to handle during input - international - independent of medium	- maintenace and marketing organisation needed - out-of-date (system, discipline) - difficult to use - too many interpretations possible - copyright problems - wide, scattered collections - computer applications clumsy
Opportunities	**Threats**
- shared classification - end-user training - computer applications authority lists index vocabularies user manuals - combining with subject headings	- maintenance interruption - computer applications difficult - other classifications and thesauri

IFLA General Conference Stockholm 1990

Division: Bibliographical control

Section on Classification and Indexing

112-CLASS-2-E

IFLA Section on Classification and Indexing 1977-1988

by

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For internal use only:
Meeting No: 113
~~SI: yes~~/
Estimated number of participants in the meeting:

Recently international cooperation in the field of classification marked its 100th anniversary. For the first time classification problems were specifically discussed in September 1895 at the International Conference of Bibliography in Brussels. The participants, who gathered there on the initiative of Paul Otlet and Henri La Fontaine, stated the following in the Resolutions: "The Conference considers that the Decimal Classification gives fully satisfactory results from an international and practical point of view".[2] This statement concerned the Decimal Classification (DC) of Melvil Dewey, who was at this Conference proclaimed honorary member of the International Institute of Bibliography (IIB). Nevertheless, ten years passed before the DC IIB, developed by two Belgians on the basis of M.Dewey's work, began to gain world recognition.

The destiny of the Universal Decimal Classification (UDC) (the DC IIB was given this name in the 20s) proved to be a happy one.

After a number of transformations the IIB finally turned into the International Federation for Documentation (FID), which became an authoritative international organization. The UDC became the main instrument of its activities. It was only natural that leading specialists from many countries took part in the development of the theory and methodology of the UDC. Its problems were discussed at FID general congresses. Many publications, including Soviet ones, actively spread the opinion that the UDC was the one and only international system. However, the development of the classification theory was not limited to the UBC alone and in some countries the UBC was never adopted by libraries and information centres,and they developed their own frequently national, systems. With the USA such a system was the

USA Library of Congress Classification along with which Dewey's DC was used in libraries. With each edition, put out by the Forest Press publishing=house, the content of the DC appreciably widened. DC tables were then actively translated into many languages and found application in scores of States in Asia, Africa and Latin America. A paradoxical situation came about. International traditions attributed classification problems to the jurisdiction of FID, and by this reason IFLA did not concern itself with them for many years. However, FID showed interest only in the UDC, paying little attention to other systems. Specialists, librarians, and teachers of library schools could not pool professional experience and jointly discuss the problems, which interested them, neither could they exchange opionions.

It was decided that within the IFLA framework, the "classification intiative" would be displayed by the Section on cataloguing, which was engaged in related activities. On discussing J.Downing's[3] (Great Britain) proposal, put forward at the 43rd IFLA Session (Brussels, 1977), the standing committee of the Section supported this initiative. In December, 1977, the IFLA Executive Board (EB) decided to organize a Round Table (RT) on Classification, which was to be attached to the Section on cataloguing.

The first open meeting of the RT took place within the framework of the 44th IFLA Session (Štrbské Pleso, Czechoslovakia, 1978). The presence of forty=two specialists at this conference spoke of a great interest in problems of classification. This interest was also expressed in scores of letters received by the IFLA EB in reply to the question about the expediency of establishing the RT. Thus, the State Lenin Library informed that

it supported the idea and suggested some themes for inclussion into the programme, including the report of our representative on the Soviet LBC.[4] After acquainting those present at the discussion with the content of the suggestions, which had come in, J. Downing stressed that the aim of exchange of information at the sessions of the RT would be the study of classification practice and not of the theory. Further two reports were presented. J.Humphry[5] (USA) spoke of the 19th edition of the DC, which was being prepared for publication; J.Mills[6] (UK) familiarized the audience with the new Bliss's Bibliographic Classification, an universal faceted system, developed in UK. The RT senior officers were elected at the next, 45th IFLA session (Copenhagen, 1979). J.Downing was elected Chairman and Frances Hinton[7] (USA) - the Secretary. Once again the open sessions collected a wide audience. G.Lloyd[8], who was especially invited to the session, exposed the principles of construction of the Broad System of Ordering, which had been worked out by FID and UNESCO for the support of relations between information centres, which used different systems of classification and coding, The second report "A view from the editor's clair" was presented by B.Custer[9] (USA), who had experience of twenty=five years standing in the editing of DC tables at the "Forest Press". The question of turning the RT into an independent section was among other things discussed at a working meeting.

The 46th IFLA Session was convoked in Manila (the Philippines, 1980). The RT executives had coordinated the thematic agenda with the problems of the region in advance. The two open meetings were successful. At the first session (87 participants) the report of J.McKinley[10] (Australia), who could not attend the

session, on the classification on the Australian continent was read out. At the second meeting (110 participants), a reported devoted to the practice of Malaysia, was presented by Mrs. Kim Sce Ch'ng[11] (Malaysia). It was at these sessions that reports concerned with area studies were read for the first time. A letter, in which it was suggested that such surveys should become a traditional feature, was sent to IFLA by the State Lenin Library already in 1978. However, we met with serious objections on the part of the participants of the discussion ahainst this suggestion. The preparation of such a survey is a time=consuming task, which is involved with a special study, particularly in those cases when the national Library lacks the necessary information . Moreover departmental disunity impedes the gathering of objective and comprehensive information. J.MacKinley gathered the data for this report through sending a questionnaire to the different libraries, while the second speaker was supplied with the necessary information by the Malaysian Library Association. The discussion showed that the area=study approach was desirable since only in this case could the information be sufficiently objective. If the speaker deals with only one classification system, one gets the impression that no other systems are used in the given country. We must agree with this conclusion.

At the working meetings in Manila programme documents, the drafts of which were introduced by Norwegian specialists B.Bernhardt[12] and T.Henriksen[13], were carefully looked into. Questions of planning of scientific projects of international character, which would be financed by IFLA, were discussed. Representatives of Canada, Nigeria, the Philippines and USA put forward some amendments and additions to the draft of the programmes of the future section.

On November 5, 1980, the IFLA EB, at its meeting in Leipzing turned the RT on Classification into the Section on Classification and Subject Cataloguing and approved the programme of its activities [14]. The first organizational meeting of the Section took place in the following year, during the 47th IFLA Session (Leipzig, 1981). The Standing Committee (SC) of the Section for 1981-1983 was formed, and the Chairman (T.Henriksen)and the Secretary (S.Jouguelet)[15] were elected. The SC membership included representatives if UK, USA, France, FRG, Sweden, Norway and the USSR (E.R.Sukiasian). G.Pflug (FRG)[16] presented the report "Classification and subject cataloguing in German=speaking countries". This was followed by the discussion of papers by B.Bernhardt and T.Henriksen dealing with programme documents.[17] The Section meeting were for the last time conducted by its founder J.Downing. The programme, which was approved at the session, was submitted to the EB.

In Leipzig, SC members discussed the prospects of their work. T.Henriksen stated that he intended to work on problems of standardization. Much in this field called for special re-

search. Standardization in the field of descriptive cataloguing has achieved greater success than standardization in the field of systematization or subject cataloguing.

The 48th IFLA Session assembled in August, 1982 in Montreal (Canada). The open meetings of the Section attracted such a wide audience that the usual registration was not conducted. Three reports were delivered and discussed. Jougelet and M.Fournier [18] (Canada) jointly analysed the French version of the USA Library of Congress List of Subject Headings. J.Humphry spoke of the international aspects of Dewey's DC. Three employees of the Forest Press: W.Curley [19] (problems of international dissemination of the DC). J.Comoromi [20] (analysis of amendments and additions to the DC) and M.Aman [21], who presented the translation of the DC into Arabic,also delivered their papers. Further one of the leading officers of the FID, M.L.Vig [22](Denmark) Presented the report about new developments of the UDC. This was a second report submitted to the IFLA by a FID representative, a fact which spoke of the consolidation of relations between these two international organizations. This time no area study was included in the programme. A SC member N.Williamson [23] published an article on the state of subject cataloguing in Canada[24], timing it for the opening of the IFLA Session.

Regular meetings of the Section took place in August 1983 within the framework of the 49th IFLA Session (Munich, FRG). Prior to these sessions a number of area studies were published.[25] A number of specialists were especially invited to speak at the Section meetings and many participants came to Munich for only one day. The report by D.Austin (UK)[26] evoked great interest.He headed the development of an automated system of compilation of

a printed alphabetic subject index for the "British National Bibliography"; he is also the first winner of the Ranganathan International Award. Many people were particularly interested in labour intensity involved with indexing and the professional skill of specialists, working in this field. The project of usage of this system in the Deutsche Bibliothek was described in B.Maassen's [27] (FRG) report. Very soon these two papers were published.[28] The next open meeting assembled so a big an audience that it was decided to transfer it to the larger halls with simultaneous translation B.Kelm[29] (FRG) told the participants about the application of subject cataloguing in the computerized system of the Deutsche Bibliothek in Frankfurt. As the report was read by a librarian and not a computer specialist, it abounded in many interesting examples, and concrete and useful information. The text of this report has been put out.[30] Further the chief editor of the journal "International Classification", I.Dahlberg [31] (FRG) informed the audience about some new publications. In particular, she displayed the first volume of the "International Bibliography on Classification and Indexing", which covers information on literature published in the period from 1950 to 1982. In it we found sufficiently representative information on the LBC, which, as it turned out, is, not without reason, considered to be one of the largest contemporary classification systems.

The intermediate report on the theme "Survey of classification systems used in national bibliographies", prepared by the Soviet representative, was discussed at the working meeting of the Section. It was necessary to dispel a certain distrust,evoked by the lack of the questionnaire element in our work, associated with research of this kind. The collections of the USSR

State Library permitted us to gather sufficiently representative materials for analysis directly through primary sources - National bibliographies of different countries of the world. In the course of the discussion, the idea of preparing a similar survey of classification systems, used in automated data bases, was born. Nevertheless, such a survey cannot be prepared without financial support and so T.Henriksen and N.Williamson decided that they would take upon themselves the task of mapping out a substantiated appeal for the necessary funds.

Regular meetings of the Section were conducted in August, 1984 in Nairobi (Kenya) within the framework of the 50th IFLA Session. Two reports: M.Muriuki's [32] "Classification and subject cataloguing in East Africa" and P.Holley's [33] "The consequences of new technologies in classification and subject cataloguing in the Third World countries" were presented. Both reports were published after the IFLA Session.[34] We mention the publication of the Session's documents not casually for they speak both of the quality of the reports and of the wide social interest the problems under discussion arouse. At every IFLA Session hundreds of reports and brief papers are presented and out of this number less than 10% are selected for publication.

At the working meeting in Nairobi, T.Henriksen acquainted the participants with materials, sent by the USSR for the IFLA session: "Classification systems in national bibliography" and "Standardization of terminology in the field of classification". The first theme had been planned in advance and the Standing Committee recommended that the final text of the report be delivered at the regular session in Chicago. The materials on terminology were discussed with interest. The glossary is prefaced

by and enplanatory text, then each of the 26 terms, standardized in the USSR and included into the glossary, are given definitions in English, followed by equivalent terms in G, F and R. We were eager to hear the comments of our colleagues as we had some doubts as to the correctness of some equivalent terms.

In April, 1985, the new SC membership of the Section was approved. Along with specialists from the former structure (T.Henriksen, R.Holley, B.Kelm, N.Williamson, S.Jouguelet, D.Danesi [35] and E.R.Sukiasian), new members - J.Butcher [36] (UK), M.L.Vig (Denmark) and E.Fritjofsson [37] (Sweden) were introduced.

In many respects the 51st IFLA Session (Chicago, USA, 1985) proved to be a remarkable one in the history of the Section on Classification and Subject Cataloguing. The financing of the theme "The use of classification in automated systems" was begun and the responsible officer - N.Williamson was nominated. The two open meetings assembled a large audience. At the first meeting the report "Classification in the USA" by Holley (the report is published [38]) and the report on the project of the use of the DC in the on=line catalogue by K.Markey [39] and A.Demeyer [40] were presented. The authors were given the opportunity to published the text of the report.[41] At the second meeting S.Jouguelet acquainted the audience with the current state and prospects of subject cataloguing in France, while N.Williamson told the participants about the application of classification in automated systems of the interactive type, realized in the USA. In connection with the emergence of new aspects in the Section's activities, involved with automation, it was suggested that the Section be renamed and in the future be called the "Section on Classification and Indexing". The suggestion was sent to the EB for approval.

The report on the theme "Application of classification Systems in National Bibliography" was presented at the working meeting in Chicago. In its final version the work represented a survey of 221 publications of national bibliographies of different countries, beginning with 1980. On the basis of an analysis of the latter brief recommendations for publishers were offered. In the report prefaces to editions, methods of grouping materials, applied classification systems (both for the grouping of data, and those found within the composition of bibliographical records) are viewed. Attention is drawn to the opportunity for precise identification of the classification system, its version and edition. The materials of the analysis are presented in a formalized form and illustrated by xerocopies of the appropriate excerpts. It turned out that, to put it mildly, publishers of national bibliographies were poorly acquainted with similar publications put out in other countries, and in this way the best "know=how" remains a closed book. Many of these editions lack data, which we hold should make up an obligatory minimum. However, there exist many very interesting devices, which are actively used by publishers. Thus, examples of bibliographical records are provided with a detailed decipher of each element. Lists of the main divisions of the classification system are given in a number of wide=spread languages. True, in most cases it is difficult to establish precisely what edition of classification tables is used. Systematic arrangement is used in 48.9% of the editions, moreover in the majority of cases tables of the DC are used and in 25% the cases it is the UDC. Alphabetic arrangement is found in 25.3% and by subject in 23.5% of the editions. Formal methods of grouping (for instance, by numbers, or by documents) are also used.

Formulating the following recommendations, we aimed to be concise and took into consideration the fact that every situation can be illustrated by an example, taken from realistically existing editions:

"1. It is recommended that the first number of the edition for every year be furnished with a preface (the text is dubbed in the most widely spread languages), the obligatory elements of which included: a description of the structure of the index, an example (model) of a bibliographical record with the exposition of all its elements.

2. If a systematic arrangement of material is accepted for the index, it is recommended to annually place in the first number a complete list of all divisions (headings and subheadings) in the form of a classification table.

3. The text of the preface should contain a full bibliographical entry of that edition of the classification tables, which is used for the systematization of publications in the index. Bibliographical data can be supplemented with information on the accepted amendments and additions (with the indication of the publication), and information on conventional signs, additions, specifications, etc., introduced independently.

4. It is recommended that one or more classification numbers be introduced into the composition of the bibliographical record. Moreover, the guiding principles of the systematization (be it the exposition of only the general aspects of the content or an in=depth and multi=aspect characterization) of each publication can be revealed in the preface".

The SC members approved the work performed by their colleagues, but regarded it as incomplete and suggested they "continue

this research". The report was not published and was later used by B.Kelm, when she worked on her report in 1987.[47]

R.Holley was elected chairman of the section and B.Kelm - secretary.

The questionnaire worked out by N.Williamson, which has already been sent to 35 libraries, and the plan for the study of the new theme were approved.

The 52nd IFLA Session took place in Tokyo (1986). Reports, read at the Section's meetings, collected a large audience (150-180 people). The current state of classification in Japan was discussed in detail in the report by Hiroshi Ishiyama [42] (the report was very soon put out [43]), and the situation in the people's Republic of China in the report by Yan Lizhong.[44] At the second meeting T.Henriksen characterized the international medium edition of the UDC in book and machine-readable form, while N.Williamson spoke of the prospects of the interactive catalogue in the USA Library of Congress (both reports were published [45]). The Section disseminated our report on the theme "The New State Standard of the USSR: Systematization of Documents. General requirements". The suggestion that the report be published was received with satisfaction. This report views the content of GOST 7.44-84, which was introduced in USSR since January 1,1985. In the period, when the standard was being developed, we failed to find analogues both on the international and nation levels. It later turned out that similar work was conducted simultaneously in UK and within the ISO framework, where at the same time similar documents had been approved. Nonetheless, the Soviet standard had a number of specific features: in it classification systems, obligaroty within the frame=work of the country, were

regulated for the first time, obligatory conditions for systemization were listed and technological procedures were described in a more formalized style.

In 1986 the objectives and term of office of the Section for Classification and Indexing were specified in the IFLA Medium Term Programme, approved for the period up to the year 1991.

The 53rd IFLA Session was convened in Brighton (UK) in August, 1987. Two new members D.McGarry [46] (USA) and M.Pino (Portugal) [47] joined the SC. One open meeting at which the three reports were presented: N.Williamson's report was concerned with the theme of the research, which was under way, P.Paulson[48](USA) presented an interesting paper entitled "The Dewey Decimal Classification enters the computer era: Developing the DDC Database and Editorial Support System", while L.F.Kozlova (USSR) read the report by E.R.Sukiasian "Classification numbers in Soviet publications: Review of classification systems and regulations of class numbers publication in Soviet books and periodicals", since the author did not attend the session. The experience of the Forest Press, which was described by P.Paulson, is of great interest to Soviet specialists. In includes a machine=readable base, supporting the automated maintenance of classification tables, their editing (including the introduction of amendments and additions) and automated retrieval with a subject entry.

The information that within the framework of the Brighton Session, P.Holley would read his report "Development and progress in classification and indexing" and that B.Kelm would deliver the report "The use of classification in National bibliographies" at the seminar on national bibliography was received with satisfaction. The absence of a report dealing with classification practice in UK was made up for by published materials.[49]

In this way the Section managed to publish a substantial amount of material, which greatly exceeded the limits of the new IFLA regulations: since 1987 the Section had been allowed to conduct only one open meeting.

The regular 54th IFLA Session took place in Sydney (Australia) in 1988. The leadership of the Section was obliged to select only two reports out of the large number of papers they had received. E.Hall[50] (Australia) acquainted the participants with the interesting practice of her country, while H.Williamson (Canada) read a summarizinf report on a theme, on which the Section had focused its attention for some years. It was followed by a wide discussion since over a hundred people attended the session. The chairman of the Section R.Holley considered it possible to disseminate our report at the session and recommend it for publication. The article "The classification system in conditions of automated retrieval" has been printed.[45a]

The meeting in Sydney marked the conclusion of a certain period in the Section's activities. After eight years of work, many of those, who had organized the RT and worked in the Section in the first years of its establishment, have withdrawn from the section. In June, 1989, prior to the regular IFLA Session in Paris, the names of new members of the Standing Committee of the Section were announced. They are: S.N.Artamonova (USSR)[51], J.Beall (USA)[52], D.Duncan (Canada)[53], C.Freschard (France)[54], I.Lopes (Portugal)[55], W.Stephan (FRG)[56], and E.Svenonius (USA)[57]. It was also announced that D.MacHarry, M.Pino and J.Butcher are continuing to work within the Section.[58]

We will now sum up the activities of the Section accomplished within eleven years, from 1978 to 1988. Even if we were

to disregard the information papers and reports, discussed at the Section's working meerings, still the work accomplished by the Section deserves praise. During this period the Section held 16 open (public) meetings, many of which collected a hundred people and more. In conditions of a strict time=limit, characteristic of IFLA sessions, when a score of IFLA bodies are in session simultaneouly, such an activity speaks of the wide interest of people in problems of classififcation and indexing. All in all 28 reports were delivered, their being representatives of 13 countries (USA, Canada, UK, FRG, USSR, Australia, France, Norway, Denmark, Japan, Malaysia, China and Kenya). The bulk of these reports have been published and have become available to a wide circle of specialists.

The analysis of the themes of the reports shows that little by little the attention of the Section is shifting towards prospective directions - the automation of indexing processes. Ten reports were devoted to problems of electronic catalogues, on=line systems and automation. Eight reports were concerned with classification systems (mainly Dewey's DC) and five dealt with subject indexing. The problem of cataloguing in publication was viewed only once. Gradually the tradition of presenting area "regional" studies took root and nine reports of this kind were delivered.

The traditional working language of the Section's meetings is English. Nevertherless, all reports were always translated into French and German and when it was necessary translation was provided at the session thanks to the efforts of some SC members for whom these languages were native ones: S.Jouhuelet (French) and B.Kelm (German). This aspect of their activity should especially be mentioned since they helped their colleagues during many years.

Undoutedly, the Section activities have played an important role in drawing different standpoints closer, in the formation of uniform scientific positions, and in the informing specialists from different countries on the state of affairs. Nevertheless, to my thinking, the main sum total of our work lies in the identification of directions of further research, directions, which are common to all countries. It is on this plane that the activities of specialists from different countries within the IFLA deserve respect and support on the part of the library administration. Professional contacts are beneficial not to the international community, but to each separate country, on the condition, of course, that its representatives actively participate in the IFLA work.

N O T E S

1. The survey of the section's activities are based both on published and unpublished documents. As a rule, aspects of a public nature are viewed. Working meetings, mentioned incidentally, here, were devoted to financial, organizational and informative questions, which are of interest to only a narrow circle of specialists.
2. Cited from the book: Boyd Rayward W. The Universe of information; The work of Paul Otlet for Documentation and International organisation. - Moscow, 1975. - P.47.
3. Joel Dowding - Director of Copyright and English Language Services, Bibliographic Services Division, British Library, Ldn. Some years later J.Downing wrote a short article in which he described the situation, which preceded the establishment of the RT.

See Downing J. Round table on Classification / IFLA Journal, 1980. Vol.6, N 3. P.214-215.

4. The report was prepared by N.P.Zhurzhalina for the regular session in Copenhagen, but it was delivered to the RT officers when it was too late. Very soon an abbreviated version was published: Zhurzhalina N.P. The Soviet Bibliothecal=Bibliographical Classification (BBK) / Int.Cataloguing. 1980. Vol.9, N 2. P.21-22.
5. John Humphry - Executive Director of Forest Press.
6. Jack Mills - one of the founders and active members of the British Classification Research Group, which headed the Association for the new Bliss's Bibliographical Classification.
7. Ms.Frances Hinton - Chief, Processing Division, The Free Library of Philadelphia, USA.
8. Geoffrey Lloyd - a FID member of many years standing. He took part in the development of the UDC. Jointly with E.J. Coates and J.Simandl, he developed the BSO (Broad System of Ordering).
9. Benjamin A. Custer, Forest Press, USA.
10. John McKinlay, La Trobe University, Victoria, Australia. The report is published: McKinlay J. Classification in Australian Libraries / Int. Classification. 1980. Vol.7, N 3. P.131-134.
11. Kim See Ch'ng - Director and Chief Librarian of the Lincoln Center in Kuala Lumpur, Malaysia.
12. B.Bernhardt, Norwegian Office for Research and Special Libraries.
13. Tor Henriksen, Rector Norwegian School of Librarianship (Statens bibliotekhogskole), Oslo, Norway.

14. Information on the conversion of the RT into a Section was published in "International Classification": New IFLA Section on Classification / Int. Classification. 1981. Vol.8, N 1. P.32. Since then the journal regularly publishes informative materials on the Section's activities and articles, based on reports presented at the sessions of the Section.
15. Ms. Suzanne Jouguelet, Classification et catalogage matieres, Bibliotheque Nationale, Paris, France. In 1982 S. Jouguelet moved to Lyons and in this connectection suggested that her candidacy be replaced, but the SC members voiced their confidence and managed to convince her that the change of a post and library would not hinder her in the performance of her duties of Section Secretary. Since 1982 she works at the Bibliotheque Muncipale de La Part=Dieu, Lyons, France.
16. Gunter Pflug - then Generaldirektor, Deutsche Bibliothek, Frankfurt, FRG. The report was published: Pflug G. Classification in the libraries of the German Federal Republic / Int. Classification. 1982. Vol.9, N 1. P.27-29.
17. The terms of references of the Section and the programme of its activities have been published. See: New IFLA Section of Classififcation / Int. Classification. 1981. Vol.8, N 1. P.32; Henriksen T. Classification and Subject Cataloguing in the 1980's: IFLA's role / Int. Cataloguing. 1981. Vol. 10, N 4. P.47-48.
18. Michel Fournier, Laval University, Quebec, Canada.
19. Walter W. Curley, Forest Press, USA.
20. John P. Comoromi, Forest Press, USA.

21. Mohammed M.Aman, School of Library Science, University of Winsconsin, USA.

22. Morten Laursen Vig, then Roskilde University Library, Denmark.

23. Ms.Nancy Williamson, Faculty of Library and Information Science, University of Toronto, Canada.

24. Williamson N. Subject cataloguing in Canada / Int. Cataloguing. 1982. Vol.11, N 3. P.30-32.

25. Kelm B. Classification and Subject Cataloguing in the Federal Republic of Germany // Int. Cataloguing. 1983. Vol. 12,N 2. P.29-30; Pflug G. Classififcation in the libraries of the German Federal Republic / Int. Classififcation.1982. Vol.9, N 1. P.27-29.

26. Derek Austin, The British Library, London, U.K.

27. B.Maasen, Deutsche Bibliothek, Frankfurt, FRG.

28. Austin D. PRECIS: basic principles, function and use / Int. Cataloguing. 1984. Vol.13, N 1. P.9-12; Maassen B. The PRECIS Project of the Deutsche Bibliothek / Int.Cataloguing. 1984. Vol.13, N 2. P.15-17.

29. Barbara Kelm, Deutsche Bibliothek, Frankfurt, RFG.

30. Kelm B. Computer=aided subject cataloguing in the Deutsche Bibliothek in Frankfurt-am-Main / Int. Cataloguing. 1984. Vol.13, N 4. P.45-48.

31. Ingetraut Dahlberg, Frankfurt-am-Main, FRG.

32. Margaret Muriuki, Senior Assistant Librarian, University of Nairobi.

33. Robert P.Holley, Marriott Library, University of Utah,Salt Lake City, Utah, USA.

34. Muriuki M. Classification and subject cataloguing in Kenya:

including a short history of Kenyan libraries / Int. Cataloguing. 1984. Vol.13, N 4. P.39-41; Holley R.P. The consequences of new technologies in classififcation and subject cataloguing in the Third World Countries: the technological gap / Int. Cataloguing. 1985. Vol.14, N 2. P.19-22.

35. Ms.D.Danesi, Biblioteca di Scandicci, Firenze, Italy.
36. Ms.Joyce E.Butcher, The British Library, Ldn, UK.
37. E.Fritjofsson, Uppsala Universitetbibliotek, Uppsala,Sweden.
38. Holley R.P. Classification in the USA / Int. Classification. 1986. Vol.13, N 2. P.73-78.
39. Ms.Karen Markey, Research Scientist, OCLC, Dublin, Ohio,USA.
40. Ms.Ann Demeyer, Systems Analyst, OCLC, Dublin, Ohio, USA.
41. Markey K., Demeyer A. Finding of the Dewey Decimal classification on=line project / Int. Cataloguing. 1986. Vol.15, N 2. P.15-19. Also see: Markey K., Demeyer A. Dewey Decimal Classification on=line project / Int. Cataloguing. 1985. Vol.14, N 3. P.31-34; Markey K. Class Number Searching in an Experimental Online Catalog / Int. Classififcation.1986. Vol.13, N 3. P.142-150.
42. Hiroshi Ishiyama, Director, Processing Coordinating Office, Acquisition Department, National Diet Library, Tokyo.
43. Ishiyama H. The trend of classififcation in Japan / Int. Cataloguing. 1986. Vol.15, N 3. P.31-33.
44. Yan Lizhong, Deputy Director, Library of Academy of Sciences of the People's Republic of China.
45. Henriksen T. UDC: BS 1000 International Medium Edition in book and machine=readable form / Int. Cataloguing. 1987. Vol.16, N 2. P.15-16; Williamson N. The Library of Congress Classification: problems and prospects in online retrieval / Int. Cataloguing. 1986. Vol.15, N 4. P.45-48.

45a. Sukiasian E.R. The new State Standard of the USSR: "Systematization of Documents. General requirements / Int. Cataloguing. 1987. Vol.16, N 2. P.22-23.

46. Ms.Dorothy McGarry, Physical Sciences and Technology Libraries, University of California, Los Angeles, USA.

47. Ms.M.Pino, Lisboa, Portugal.

48. Peter J.Paulson, Forest Press, USA.

49. Int. Cataloguing. 1987. Vol.16, N 3, P.31-34.

50. Ms.Elaine Hall, State Library of New South Wales, Sydney, Australia.

51. Ms.Artamonova, Svetlana N. - chief librarian, USSR Lenin State Library, Cand. of Pedagog. Sci.

52. Ms.Julianne Beall, Library of Congress, Washington, USA.

53. Ms.Donald Duncan, McLennan Library, McGill University, Montreal, Canada.

54. Ms.Chantal Freschard, France.

55. Ms.Ines Lopes, Portugal.

56. Werner Stephen, FRG.

57. Ms.Elaine Svenonius, USA.

58. At the meeting of the Section in Paris, in 1989, Ms.D.McGarry (USA) was elected Chairman of the Section on Classification and Indexing and Ms.D.Duncan (Canada) - secretary.

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CD-ROM : its use in Jamaica and its potential for developing countries

by

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CD-ROM : ITS USE IN JAMAICA AND ITS POTENTIAL FOR DEVELOPING COUNTRIES

Abstract

CD-ROM (Compact Disc Read Only Memory) has been accepted as a cost-effective storage medium of large amounts of information in libraries in the developed and developing world.

Its use in Jamaica by the National Library of Jamaica, the University of the West Indies, Mona Campus and the West Indies College Library are outlined and its potential as a new medium of information delivery offers some solutions to the enhancement of the information infrastructure in developing countries.

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INTRODUCTION

CD-ROM (Compact Disc Read Only Memory) is one of a family of optical storage technology that includes compact audio discs, interactive and digital video discs and optical data discs. It is a promising type of information format which relies on pre-recorded optical discs operated by drives which utilize laser beams to read the data.

Heimburger's Guide to CD-ROM [1] is a state of the art review of CD-ROM technology and several additional articles by Mullan and Blick [2] Bartenbach [3] and Schultz and Kristine Salomon [4] have outlined its potential and use.

The impact of CD-ROM technology on information requirements in the developing and less developed countries has been documented by Beaumont [5] Primus [6] and Nichols and Majid [7]. Its potential and use as an information tool in the process of national development is unquestioned.

THE USE OF CD-ROM IN JAMAICA

Jamaica an island in the Caribbean is located 90 miles south of Cuba and 600 miles south of Florida, United States of America. It is the largest of the English-speaking West Indian islands with a population of 2.2 million. It has a well-developed information infrastructure supported by adequate internal and external telecommunication services. On the scale of developed, developing, less developed countries, Jamaica is classified as developing by the United Nations.[8]

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National Information System

The national information system of Jamaica is co-ordinateud by the National Council on Libraries, Archives and Documentation Services (NACOLADS) established in 1973 by the Government of Jamaica. The organisational framework is based on a series of 5 information networks co-ordinated by focal point institutions at the National Library of Jamaica(NLJ), the Jamaica Library Service (JLS), the Libraries of the University of the West Indies (UWI), the Jamaica Archives and Records Department (JARD) and the Statistical Institute of Jamaica (STATIN). (See illustration p.12)

The use of CD-ROM technology began in Jamaica in 1988 with the acquisition and installation of CD-ROM drives and discs in the National Library of Jamaica, the University of the West Indies, Mona Campus and the West Indies College Library. **BiblioFile** and **OCLC CAT CD450** were acquired to support cataloguing functions and **MEDLINE COMPACT CAMBRIDGE, LILACS, POPLINE** and **ERIC** were acquired to support reference and research services. Some of the Wilsondiscs e.g. **Readers Guide to Periodical Literature** and **Library Literature** were acquired to support teaching and research functions.

The National Library and the University of the West Indies are located in the capital city of Kingston and West Indies College is located in Mandeville, the fifth largest town after Kingston.

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National Library of Jamaica

The National Library, the chief focal point of the national information system, provides guidance and co-ordinates co-operative activities of 4 sectoral networks of public and private sector libraries. These activities include the sharing of resources and development of computerized databases. In order to support its role as chief focal point of the national information system, the National Library of Jamaica installed **BiblioFile** on a Hitachi drive attached to a Hewlett Packard Vectra PC.

BiblioFile is a cataloguing support system issued by the Library Corporation in Washington, D.C. and is produced from data tapes obtained from the Library of Congress. As CD-ROM cataloguing is straight-forward the National Library of Jamaica's Technical Services Department uses a clerical operator to execute the initial search. The operator searches for the desired bibliographical record and a paper copy is printed and routed with the item to a cataloguer for editing. The edited copy with corrections and additions of classification numbers are typed and cards printed.

A centralised cataloguing service utilizing **BiblioFile** is being offered through the Library Extension Services Department of the National Library to network libraries in public and private sector organisations. Small units without professional librarians have their materials catalogued and classified and catalogue cards

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provided by Staff of this department.

The Department has been able to assist the Calvin McKain Library, College of Arts, Science and Technology in reducing their cataloguing backlog. The library supplied a list of items and a clerical operator using **BiblioFile** retrieved and down loaded the records on floppy discs supplied by the College Library. The records were edited by the staff at the college and loaded on their online database.

This service is still to be evaluated but initial studies suggest that it is cheaper when compared to using an online information service or operating its own manual service.

University of the West Indies

The libraries of the University of the West Indies comprise the Main Library with its collection on arts, social science and general reference works; the Science Library with its collection on physical and biological sciences and pre-clinical medicine and the Medical Library with its collection on clinical medicine. These three libraries located in separate buildings on the campus, are under the direction of the Campus Librarian. There are also other libraries at the Institute of Social and Economic Research (ISER), the School of Education and a number of departments including the Department of Library Studies.

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The University of the West Indies through its Distance Teaching Experiment (UWIDITE) based in Jamaica has linked the three campuses located in Jamaica, Trinidad and Barbados and its centres in St. Lucia and Dominica via leased telecommunications network. The UWIDITE network was used to link the campus libraries with OCLC in Dublin, Ohio. The cost-benefits of the link with OCLC would enable the library to catalogue the backlog which had accumulated in the libraries on the Mona Campus.

The OCLC CAT CD450 System which is now being used has so far proved more cost-effective. This system is only available to OCLC participants and offers similar online access capabilities. The searching is done by professional librarians who retrieve the records, edit online and store. These are down loaded and sent in off peak periods to OCLC for printing of catalogue cards which are returned by mail. Original cataloguing records are also input and processed in the same way.

The University Library has been able to reduce the backlog of material to be catalogued using CD-ROM technology and with the acquisition of a printer and other accessories the printing of the catalogue cards can be done in-house.

In the Medical Library of the University of the West Indies, MEDLINE Compact Cambridge is extensively used to support its reference services. There are two work stations and these are available for use by undergraduate and post graduate students and faculty members.

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The library staff instruct and encourage patrons to conduct searches. Staff also conduct searches on request.

LILACS and POPLINE are not as extensively used as often it means re-booting the machine and changing discs. User satisfaction is very high and medical personnel find the abstracts very useful. Medical doctors download records for their own use on diskettes and often return search results to the library for use by other patrons and staff.

The Department of Library Studies in the Faculty of Arts and General Studies University of the West Indies has an enrollment of 69 undergraduate students and 14 post graduate students enrolled in the Masters in Library Science programme. The department offers courses in Automation in Libraries and Automation in Information. Two CD-ROM drives attached to an IBM PC/XT and an Everex 286/12 are available. Approximately 14 CD-ROMs including demonstration discs are available to support teaching and reference services. The equipment is also available for use by practicing librarians, during the Summer vacation to improve their search and retrieval techniques.

West Indies College

West Indies College is a privately funded Seventh-Day Adventist educational institution located in Mandeville. The College offers four-year degree courses in Biology, Chemistry, Mathematics Education, Nursing, Medical Technology, Business Administration, Home

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Economics and Teacher Education. The Library serves students, faculty and to a lesser degree the wider community

The college is presently being upgraded and with expanded library facilities it is planned that an online public access catalogue will be installed. In anticipation of this, **BiblioFile** is being used for cataloguing and ERIC is being used for collection development and for reference searches.

POTENTIALS OF CD-ROMs IN DEVELOPING COUNTRIES

The potential for CD-ROM technology for information delivery in countries is still to be evaluated. Beaumont's recommendations[9] to potential users of CD-ROM are:

"That information centres and libraries in developing countries:

1. Organize the sharing of subscriptions in logical regional o geographic areas.
2. Work at developing resource sharing mechanisms appropriate to their needs and resources.
3. Develop appropriate means of sending requests and receiving responses.
4. Make their needs and expectations for services directly known to the information providers and publishers.
5. Continue attempts to communicate and support cooperation through computer-based networking (electronic mail and conferences)."

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In light of these recommendations, developing countries have the potential to enhance the availability of information and improve the information infrastructure of their countries using CD-ROM technology. While purchase or subscription is expensive, the disc can be used repeatedly without incurring additional costs. The possibilities exist for shared cataloguing services using a CD-ROM cataloguing system and providing catalogue cards and catalogue records on diskette to other libraries. It may also be possible to provide opportunities for mail and phone requests and making the system available for staff and researchers from other organizations.

The possibility exists for the development of Local Area Network (LAN) and Wide Area Network (WAN) using CD-ROM as more libraries use "juke boxes" and multi-disc drives. As these systems are developed, it will be easier for developing countries to acquire the technology and access to previously unavailable information cannot fail to stimulate and support indigenous research. The use of the microcomputer itself is likely to stimulate further use of other software application packages and scientific programmes.

The use of CD-ROM technology will allow librarians to develop search and retrieval skills which can be used for online searching and which will help in reducing expensive costs associated with searching overseas databases. Because of the flexibility and user-friendly search interfaces, laserdiscs are also suited to end-user searching. End-users will be able to perform their own searches and librarians will assume the role of advisors and consultants, thus allowing

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professional time to be better utilized.

The increasing number of CD-ROM data base titles published, currently over 600 titles, [10] will facilitate Universal Availability of Publications (UAP) in developing countries. Nichols writing in 1989 [11] estimates that about 40% of the CD-ROM databases are indexes/abstracts, the rest divided equally between full-text or numeric, and directory or encyclopedic types. CD-ROM products can prove useful in different ways - as indexes (MEDLINE), as sources of full text (Oxford English Dictionary), and as library technical service tools (Books in Print Plus).

The ease of conversion to CD-ROM is also a promising medium for publishing and disseminating local and regional database. Costs involved in mastering a disc is less than maintaining conventional local or regional databases. The longevity of the information's value, the slow decay rate, and the size of the database are ideal for co-operative publishing ventures for developing countries. Nichols and Majid [12] have reported on the use of CD-ROM in lesser developed countries.

Regular updates to CD-ROM database will allow national and regional centres to provide new and improved services of document delivery. Formerly mail service was the only means by which documents could be delivered, especially from the developed to some developing countries. Even air mail service was inadequate as there were delays. With the increasing numbers of libraries with fax machines

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it is possible to get documents delivered on the same day at a cheaper rate using off peak periods.

The major advantage of CD-ROM to developing countries is that it makes large databases more accessible and eliminates telecommunication and online connect charges. This potential is dramatic especially where telecommunications are poor or the cost is exorbitant. Online database systems require certain minimum conditions such as computer hardware, reliable and cheap domestic and international telecommunication and trained online searchers. In developing countries constrained by the availability of foreign exchange, not all these conditions can be met.

The charges associated with conducting a search using CD-ROM is a prorated portion of the initial startup cost which includes workstation and discs. In contrast an online search involves an ongoing expense composed of database and citation charges, telecommunication and professional staff. The cost of searches using CD-ROM declines with increased demand, but the cost of an individual online search can never fall below the variable costs associated with each search.

The training of online searchers, even where communications are adequate, is problematic. Online searchers require training which is not available in developing countries as database vendors are located in distant countries and documentation is delayed or lost in the mail. In contrast, end-users and clerical operators can easily be

trained to conduct searches using CD-ROM. The system is user-friendly and search features such as menus, prompts and help windows makes it acceptable to the end-user.

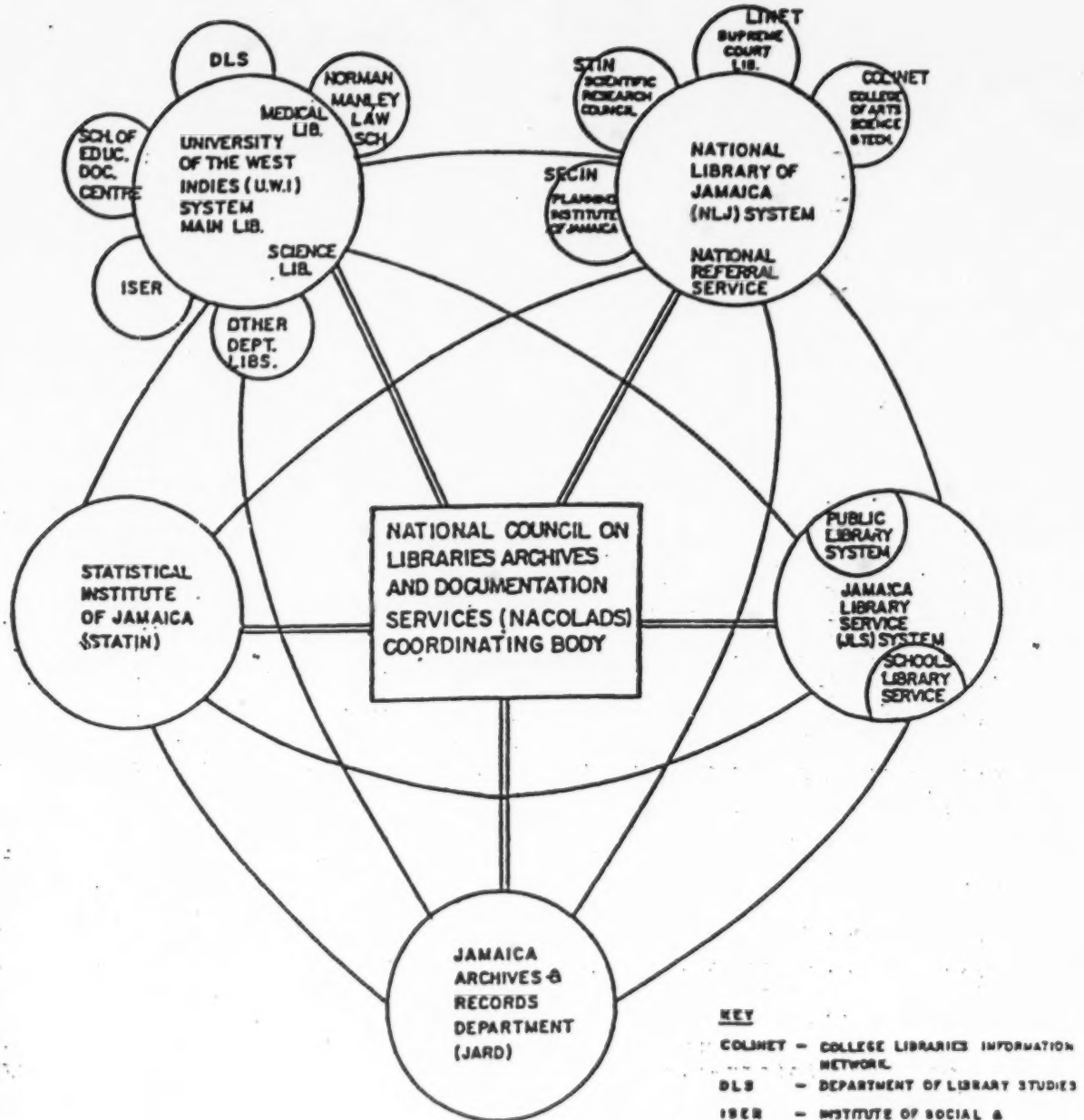
The future of CD-ROM technology in developing countries is likely to find a prominent place. It provides libraries with:

- sharing cataloguing services
- developing local area (LAN) and wide area (WAN) networks
- proficiency in search and retrieval techniques
- facilitating Universal Availability of Publications
- operating co-operative publishing ventures
- improving document delivery services
- accessing online data base without additional telecommunication cost
- a new medium for delivery of services.

As international standards for logical file structure and electronic publishing are adopted, the technology will become cost-effective. CD-ROM, like books, microforms and online media can only have a positive impact on access to information in developing countries.

THE JAMAICA NATIONAL INFORMATION SYSTEM

CHART ILLUSTRATING THE COORDINATING ROLE OF NACOLADS AND THE NATIONAL NETWORK



KEY

COLINET – COLLEGE LIBRARIES INFORMATION NETWORK.
DLS – DEPARTMENT OF LIBRARY STUDIES
ISER – INSTITUTE OF SOCIAL & ECONOMIC RESEARCH
LINET – LEGAL INFORMATION NETWORK.
SECIN – SOCIO-ECONOMIC INFORMATION NETWORK.
STIN – SCIENTIFIC & TECHNICAL INFORMATION NETWORK.

: NETWORKING LINKS.

: COORDINATION CONNECTORS.

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REFERENCES

1. Heimburger, Anneli. **Guide to CD-ROM.** Paris, Unesco, 1988.
2. Mullan, N.A. and A.R. Blick. "Initial experiences of untrained end users with a Life Sciences CD-ROM Database : a salutory experience". **North Holland Journal of Information Science** 13, 1987, p. 139-141.
3. Bartenbach. Bill. "The impact of optical disc publishing on the information community (CD-ROM - read only memory)". **Inspel**, 20 (4), 1986, p. 205-220.
4. Schultz, Kim and Kristine Salomon. "End users respond to CD-ROM" **Library Journal** 1 February 1990, p. 56-57.
5. Beaumont, Jane. **CD-ROM evaluation project : final report.** Ottawa, IDRC, 1988.
6. Primus, Wilma. Advances in library information technology : a benefit to the user or the librarian. Paper presented at the XlX Conference of the Association of Caribbean University, Research and Institutional Libraries, Martinique. 1988.
7. Nicholls, Paul and Shaheen Majid. "Impact of CD-ROM technologies on information infrastructures in less developed countries". **Canadian Library Journal** 48 (4) [In press], 1989, p. 1-10.
8. United Nations
9. Beaumont, J. op. cit. p. 45-46.
10. CD-ROMs in Print. 1990.
11. Nicholls, P.T. "Information resources on laserdisk : statistical profile of currently available CD-ROM database products,"

RANK XEROX

Laserdisk Professional, 2 (2), 1989, p. 101-108.

12. Nicholls, Paul and Shaheen Majid. op. cit. p.9.

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